





# FEDERAL AID FOR VOCATIONAL EDUCATION

A REPORT TO THE CARNEGIE FOUNDATION  
FOR THE ADVANCEMENT OF TEACHING

BY

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THE HISTORY OF THE  
CITY OF BOSTON

FROM THE FIRST SETTLEMENT  
TO THE PRESENT TIME

BY





# CONTENTS

PAGE  
V

## INTRODUCTION

### PART I

#### THE LEGISLATIVE HISTORY OF FEDERAL AID FOR VOCATIONAL EDUCATION

History of the Agricultural College Grant of 1862	3
Annual Grant authorized by the Act of 1890	19
Increased Annual Grant authorized by the Act of 1907	55
Agricultural Experiment Station Appropriations	59

### PART II

#### CONSTITUTIONAL AND EDUCATIONAL PRECEDENTS

Federal Aid for Education	69
The Constitution and Public Lands	70
The Movement for Federal Aid for Agricultural Education	73
Higher Agricultural Education in Europe	79
Senator Morrill and his Colleges	82
The Public Lands and Politics	85
Military Training in Land Grant Colleges	88

### PART III

#### SUBSEQUENT DEVELOPMENTS OF THE MORRILL ACT

Recent Movements for Federal Grants for Education	93
Land Grant Colleges and Students of Agriculture	98
Curriculum of Agricultural Colleges	107

## INDEX

117



## INTRODUCTION

THE present Bulletin, touching federal aid to education, grew out of various studies of the Foundation that had to do with the vocational schools and colleges in different states. It has seemed worth while for several reasons to publish the information thus brought together. There is wide misconception as to what took place in Congress in the enactment of the first Morrill Act, the predecessor of all other appropriations by the general government for education. The discussions which led up to the passage of that act are buried in numerous volumes of the *Congressional Record* not accessible to the public. A brief exhibit of this discussion is of high value in showing what the original intentions of Congress were, by what means the bill was enacted into law, and, most astonishing of all, the absence of any serious educational program. Congress had before it no clear, well-considered educational project. Senator Morrill himself knew very little of education. His wish was "to do something for the farmer." The notion of a series of schools suited to the needs of boys and girls from the farm had been many times suggested. His bill took this form—not from any sound educational reason, but as being one of the most likely means by which something could be done for the farmers as a makeweight to the things done for other groups in the body politic.

Some account of the process by which these bills passed Congress is also opportune at this time for the reason that Congress is being pressed to undertake the general support and, impliedly, the supervision of education in various states. Such legislation, if actually carried out, will mean a transformation of our theory of governmental administration. Education was left, under the Constitution, to the separate states. Its support and its possible direction by the federal government would signify a new conception of our governmental relations.

This consideration is all the more important because projects for taking money from the federal treasury for the support of first one, then another form of education have become increasingly frequent, and have been pushed with more and more energy. One of the objections made by the critics of the first Morrill Act was based upon anticipation of exactly this state of affairs. They argued that once the doors of the federal treasury were opened for the promotion of educational projects in the separate states, the demands for such help would come in increasing volume. The defenders of the bill sharply objected to any such interpretation, but the history of legislation shows that exactly this has taken place. The Morrill Act of 1862 was followed by the second Morrill Act of August, 1890, and this by certain measures attached to appropriation bills for the Department of Agriculture in 1907. The first Morrill Act merely appropriated a certain number of acres of the public lands to the use of the states for educational purposes, but the succeeding acts have appropriated money directly. By 1911 the grants to the states for agricultural colleges reached an annual sum of \$2,400,000.



Entirely apart from the wisdom or unwisdom of this appropriation of money by the federal government, it is important that the people of the United States should understand clearly what is being done. More and more the money of the federal treasury is being sought for educational projects of one kind or another in the separate states. In the long run there will come undoubtedly some demand for a more direct supervision of education by the federal authority. If this policy is to be entered upon, it should be taken up with a clear conception of what it means.

Perhaps no circumstance of the original Morrill legislation was more remarkable than the entire absence of any educational conception as to what sort of colleges were to be created out of the money supplied by the central government. Indeed, a large proportion of the members of Congress did not expect institutions of college grade. This whole legislation,—so momentous in its consequences, resulting in the establishment of institutions throughout all the states,—primarily educational in its scope and in its consequences, was carried out from the beginning to the end with almost no consideration of the educational problems involved. It is not too much to say that for the first fifty years of their existence the colleges thus established did very little to advance the interests of agriculture or to minister to the needs of the young men and young women on the farm. It is only within the last few years that they have addressed themselves directly to this problem.

The attitude of the federal government toward education is to-day, and will become increasingly, a matter of concern to every state and to every citizen. The Morrill Act of 1862 was the first step in a governmental policy which carries with it results of great financial magnitude and of far-reaching importance politically and educationally. It is the purpose of this Bulletin to set forth in simple fashion the beginnings of that policy and to describe the legislative procedure by which the policy of federal aid to state education was inaugurated. As to the development of this policy in the future and its importance, the American people will themselves decide.

The collection of this information was begun by Mr. Monell Sayre seven years ago. When he left the Foundation the work was taken up and carefully completed by Dr. Kandel.

HENRY S. PRITCHETT.

## PART I

### THE LEGISLATIVE HISTORY OF FEDERAL AID FOR VOCATIONAL EDUCATION

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## HISTORY OF THE AGRICULTURAL COLLEGE GRANT OF 1862

THE proposal that federal aid should be given to the states for agricultural education first came before the legislative branch of the government in the Thirty-fifth Congress. The first bill on the subject was introduced in the House of Representatives, on December 14, 1857, in the First Session of the Congress, by Mr. Morrill of Vermont. Justin S. Morrill, after passing thru the primary school and high school of his native Vermont, had begun life as a merchant, and after succeeding in that pursuit, had turned his attention to farming. His first active participation in public life occurred in the first congressional contest in which candidates of the Republican party appeared, when he was elected to the Thirty-fourth Congress. Mr. Morrill was thus beginning his second congressional term when he introduced the bill. As he was already nearly fifty years of age in 1857, few would have imagined that his legislative service would continue without interruption until almost the twentieth century. Taking his seat in the House when the Kansas-Nebraska Bill was the great topic of public discussion, Mr. Morrill was still sitting in the Senate when the Treaty of Paris brought before that body the disposition of the Philippine Islands. But he showed in the Thirty-fifth Congress, almost at the beginning of his legislative career, the skill in parliamentary procedure and the knowledge of men which in 1861 caused the House to commit into his charge the great War Tariff Bill, and in the Senate placed him for many years at the head of the powerful Committee on Finance. The proposal that the United States should begin a policy of assisting the states for agricultural education could not have been entrusted to firmer or more skilful hands.

The bill (H. R. 2) granted six million three hundred and forty thousand acres of the public land to the states, each state receiving twenty thousand acres for each senator and representative in Congress to which it was entitled under the census of 1850, the proceeds to be used in maintaining colleges of agriculture and the mechanic arts. According to the rules of the House, the appropriate committee to consider a proposal of this character was the Committee on Public Lands. Mr. Morrill, however, moved that the bill be referred to the Committee on Agriculture of which he himself was a member, and ordered to be printed. On Mr. Cobb's protesting against the order to print a bill on its introduction and reference, Mr. Morrill withdrew that part of his motion. Mr. Letcher of Virginia objected to the reference of the bill to the Committee on Agriculture on the ground that it would probably be reported back with leave to refer to the Committee on Public Lands. On the following day, December 15, the reference of the bill came up again, the motion of Mr. Letcher of the previous day pending that the bill take its usual course to the Committee on Public Lands. Mr. Morrill pointed out that the duties of the Committee on Agriculture were not defined, that the House could use its discretion in referring the bill to any committee, and that since the bill did not take charge of public lands, it should go to a committee of its friends. The House voted, however, to refer the bill to the Commit-

tee on Public Lands. The bill remained in the custody of the Committee on Public Lands for four months, until on April 15, 1858, it was reported back to the House. Mr. Cobb of Alabama, the chairman of the committee, made the report, and announced to the House that he reported the bill adversely and yielded to Mr. Walbridge of Michigan, who wished to present a minority report from the committee of those members who favored the bill. Mr. Walbridge made a motion that the report of the committee and the views of the minority be printed, "so that every gentleman may act advisedly upon the subject" before taking up the discussion on the bill. Before a vote could be taken upon this proposition, the time known in the House as the "morning hour" expired, and the consideration of the subject was laid aside. Mr. Walbridge secured permission to have the reports printed on the following day, April 16, "pending the motion to postpone."

The "morning hour" came up in the routine of the House for the next time on April 20, and the Speaker announced that the pending motion was a motion to postpone consideration of the bill to the 21st. Mr. Morrill thereupon delivered a speech submitting a substitute bill to be recommitted to the Committee on Public Lands.

Mr. Morrill began his address by reminding the House of the literal bombardment of petitions it had undergone on this subject from "the various states, North and South," state societies, county societies, and individuals. Hardly a day had passed since the beginning of the session that had been without some petition in favor of this bill. Congress had legislated for all other classes of the community; it had protected authors by means of copyright laws, it had given encouragement to inventors by patent legislation, and so on thru a long enumeration of interests whose welfare had been considered. "All direct encouragement to agriculture has been rigidly withheld," but "when commerce comes to our doors, gay in its attire and lavish in its promises, we 'hand and deliver' at once our gold. When manufactures appears, with a needy and downcast look, we tender, at worst, a 'compromise.'"

Federal aid in favor of agriculture, Mr. Morrill contended, was imperatively needed. So defective is the method of agricultural cultivation that year by year the American soil is becoming poorer, and "many foreign states support a population vastly larger per square mile than we maintain." The one way to overcome this condition, Mr. Morrill continued, was to enable each profession to educate itself. "The farmer and the mechanic require special schools and appropriate literature quite as much as any one of the so-called learned professions. . . . It is plainly an indication that education is taking a step in advance when public sentiment begins to demand that the faculties of young men shall be trained with some reference to the vocation to which they are to be devoted through life." A system of agricultural colleges would interfere in no way with the existing literary colleges.

Mr. Morrill then proceeded to outline the definite purposes that the proposed agricultural colleges would fulfil. "We need a careful, exact, and systematized registration of experiments — such as can be made at thoroughly scientific institutions, and



such as will not be made elsewhere. These tests and these tables, so furnished, will give us, when reported and collated, as is provided for in this bill, a rational induction of principles upon which we may expect to establish a proper science." "Among such problems," he continued, "we need to test the natural capability of soils and the power of different fertilizers; the relative value of different grasses for flesh, fat, and milk giving purposes; the comparative value of grain, roots, and hay for wintering stock; the value of a bushel of corn, peas, carrots, potatoes, or turnips, in pounds of beef, pork, or mutton; deep plowing as well as draining; the vitality and deterioration of seeds; breeds of animals; remedies for the potato disease and for all tribes of insects destructive to cotton, wheat, and fruit crops." He referred to attempts made to meet the need of such institutions. "In our own country the general want of such places of instruction has been so manifest that state societies and individuals have attempted to supply it, though necessarily in stinted measure. The 'plentiful lack' of funds has retarded their maturity and usefulness; but there are some examples like that of Michigan, liberally supported by the state, in the full tide of successful experiment." If the measure under discussion were passed, institutions would spring into life "where *men* do not decay. . . . It may be assumed that tuition would be free, and that the exercise of holding the plow or swinging the scythe—every whit as noble, artistic, and graceful as the posture of the gymnastic or military drill—would go far toward defraying all other expenses of the students. Muscles hardened by such training would not become soft in summer or torpid in winter; and the graduates would know how to sustain American institutions with American vigor."

Such grants as he was recommending were merely a recognition of the importance of agriculture to the people and the government of the United States. "Mr. Speaker, when a money pressure overtakes the country, like that through which we are just passing, in searching for its causes no one thinks of charging it upon agriculturists. They are not only industrious but frugal. Thrift is their cardinal virtue. They do not produce, vend or consume luxuries. They hasten slowly, and go untouched of all epidemical speculations. But when the crisis comes—when commerce, manufactures, banks, and even Government itself, quail beneath the storm, all eyes turn to the hardy tillers of the soil for relief. *They* stand, as they always stand, with enough for themselves and something to spare. They furnish raw material, freight, means of liquidation or of supply; and yet when they might be even more useful, shall we pronounce them unworthy, and deny the opportunity?" European countries—Prussia, Russia, Saxony, Belgium, England, Ireland, Scotland, France, and Austria—were doing something for the development of scientific agricultural and mechanical education. If the importance of agriculture and foreign example warranted the passing of his measure, there was no constitutional objection to the bill, for Section 3 of Article 4 of the Constitution provided that "Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States." By virtue of this power "Congress has long asserted the right to

dispose of the public lands to establish school funds and universities, and no one now questions the soundness of such a policy." This led to a review of the public land legislation since the foundation of the federal government and the absence of objection to such a disposition of a part of them as this measure contemplated. Finally, he quoted extracts from letters and messages of Washington, Jefferson, and others in favor of a national university, and pointed out that "Jackson was the steadfast friend of agriculture, and the first in 1837, to call into the Patent Office a practical farmer [Mr. Ellsworth] to collect statistics. . . . There can be no question that General Jackson and the men who coöperated with him would have approved of grants of land to all the states for the benefit of agricultural colleges."

In conclusion Mr. Morrill made an appeal to the House to "Pass this bill and we shall have done—

Something to enable the farmer to raise two blades of grass instead of one;  
 Something for every owner of land;  
 Something for all who desire to own land;  
 Something for cheap scientific education;  
 Something for every man who loves intelligence and not ignorance;  
 Something to induce the father's sons and daughters to settle and cluster around the old homestead;  
 Something to remove the last vestige of pauperism from our land;  
 Something for peace, good order, and the better support of Christian churches and common schools;  
 Something to enable sterile railroads to pay dividends;  
 Something to enable the people to bear the enormous expenditure of the national government;  
 Something to check the passion of individuals, and of the nation, for definite territorial expansion and ultimate decrepitude;  
 Something to prevent the dispersion of our population, and to concentrate it around the best lands of our country—places hallowed by church spires, and mellowed by all the influences of time—where the consumer will be placed at the door of the producer and thereby  
 Something to obtain higher prices for all sorts of agricultural productions; and  
 Something to increase the loveliness of the American landscape."

Mr. Morrill, having finished his speech, offered a substitute for the original bill which he had introduced on December 14, striking out all reference to the territories and providing for double computation in case of lands whose value was raised by railroad grants to double the minimum price.

Two days later, on April 22, the "morning hour" again making its appearance on the House calendar, the House resumed consideration of Mr. Morrill's bill, the question pending being on seconding the demand for "the previous question." This parliamentary motion has the effect, if adopted, of cutting off all debate such as is specifically provided for by the rules, and is an order to the Speaker to put to the House immediately all motions that are before it in regard to the bill, and these motions being



disposed of, to take a vote upon the question, "Shall the bill pass?" The Speaker reminded those who protested against the motion that a demand for "the previous question" was not a debatable motion, and that nothing was in order but a vote upon whether that demand should be agreed to. The "previous question" was ordered, and henceforth it was certain that a definite vote upon the bill would occur.

Altho the rules of the House permitted it to order "the previous question" at any time and thereby close the general debate, it was ruled by the Speaker that the adoption of this motion did not deprive the member reporting the bill of his opportunity to be heard. Mr. Cobb of Alabama, who had reported the bill unfavorably from the Committee on Public Lands, was therefore entitled to the floor before the Speaker should begin to put the motions concerning Mr. Morrill's substitute to a vote.

Mr. Cobb began by calling the attention of the House to "the strange course the bill had taken" since it was reported from the Committee on Public Lands. "I was under the impression," said Mr. Cobb, "that other gentlemen besides the gentleman from Vermont would have an opportunity to address the House upon the question; but motion after motion has been made, until the question has been unexpectedly forced upon us for a direct vote." Mr. Cobb then reminded the House that the Committee on Public Lands had determined "to husband the public lands and to economize their grants, in order to husband the means which the government is to receive from the sale of those lands," and had been opposed to the bill. The report of the committee, which he read, was an argument against the constitutionality of federal grants in aid of education in the states, and also, if the constitutionality of the measure was waived, an objection against the bill as being opposed to a wise policy of husbanding the public lands to safeguard the revenues. On these two subjects Mr. Cobb spoke at some length, contending in the first place that the bill was unconstitutional, and second, that the measure was unjust because the different states would benefit differently and unequally. The report did not discuss the educational aspects of the bill.

Mr. Cobb having finished, the rules now required the Speaker to put to the House the pending motions. The first motion was Mr. Morrill's, to recommit the bill with his substitute to the Committee on Public Lands. Mr. Morrill evidently concluded that this was bad parliamentary tactics, as the adoption of "the previous question" enabled him to get a vote immediately upon the passage of the bill, and he asked permission to withdraw the motion, but opponents of the bill, angered at the cutting off of debate, objected, and the motion had to be put. Mr. Morrill then appealed to the friends of the bill to vote down his own motion, and in such good discipline were the supporters of the measure that the motion to recommit was voted down 105 to 93. The substitute offered by Mr. Morrill, which had never been before a committee, was then adopted, and the Speaker informing the House that the question was upon the passage of the bill, the bill was passed by a vote of 105 to 100.

In this way, thru Mr. Morrill's ability in handling parliamentary procedure, a bill which had been reported unfavorably by its committee was passed eight days later with practically no discussion of the real merits of the bill on either side. It will also be noticed that the bill as passed had never even been considered by a committee, and that the two speeches which the House was allowed to hear did not discuss the essential character of the measure. Mr. Cobb, in opposition, never alluded to the educational question involved, and Mr. Morrill, altho he spoke generally of the value of agricultural education, did not inform the House concerning the aspect which the education provided for in the bill was to take. His speech was a strong appeal, in the diction of an older generation, to do "something for the farmer."

The bill was received in the Senate on the same day in which it was passed by the House of Representatives, and it was referred on the following day to the Committee on Public Lands. Its consideration was not unduly delayed by the committee, for on May 6 Senator Stuart of Michigan reported it back to the Senate. In doing this Senator Stuart made the unusual statement that "in view of the circumstances existing in the committee," he reported the bill without any recommendation either favorable or unfavorable. It transpired later in the course of debate that the "unusual circumstances" referred to were an even division of opinion among the senators voting in the committee.

Senator Stuart, on May 19, asked the Senate to consider the bill. Senator Pugh of Ohio objected. He said that the bill carried "probably the largest proposition for the donation of public lands that has ever been here," and he recalled to the Senate that "it has never been favorably recommended by any committee of either house." Senator Stuart insisted upon his motion, and by a vote of 28 to 24 the Senate agreed to take up the bill. But when this vote had been announced, the time had arrived for the consideration of another bill by special order, and Senator Stuart, in order that the agricultural bill might remain before the Senate, was compelled to make a new motion that all special orders be set aside. It was one thing, however, to occupy the "morning hour" with a measure, and quite another thing to displace the appropriation bills and other great legislative questions until this same measure was disposed of. Senator Clay held that the bill could not pass without debate, since it was a bill "which the Democratic party of the country has been committed against for thirty years." Senator Stuart told the Senate that the bill would not consume much time, as there would be almost no debate. Senator Mason of Virginia warned the Senate of the seriousness of taking up the bill. It would occasion debate, he said. The advocates of the bill could not hope to get the bill thru smoothly. The bill inaugurated a new policy, "being a direct appropriation from the Treasury for the encouragement of schools of agriculture." He intended to point this out and expose the character of the bill. It was absurd to say that the bill could pass without debate. The Senate then, by a vote of 29 to 26, declined to lay aside the regular order of business, and the bill, being laid aside for that day, did not reappear in the Senate during the remainder of the session.



As soon as the House assembled for the Second Session of the Thirty-fifth Congress, Senator Stuart announced on the floor that he would ask the Senate at an early day to consider the Agricultural College Grant Bill, which had been "reported back favorably" from the Committee on Public Lands. This was on December 6, 1858. On December 15 he fulfilled his promise and moved that the Senate take up the bill. Again he declared that he thought there would be little discussion. "What I desire is, on my part, and I think I may speak for the friends of this bill generally, not a discussion upon the question, but a vote upon it." It was pointed out by Senator Fitzpatrick to Senator Stuart that Senator Pugh of Ohio and Senator Johnston of Arkansas, both members of the Committee on Public Lands, and strongly opposed to the bill, were unavoidably absent from Washington, and he was asked to postpone his motion. He declined to do so, and the vote in the Senate stood a tie, 24 to 24. Vice-President Breckinridge thereupon exercised his constitutional right to vote, and casting a vote in the negative, the bill was not taken up.

When, however, on the following day, December 16, Senator Stuart asked the Senate to fix a day for the consideration of the bill, there was little opposition, and it was made a special order for December 21, at one o'clock.

It was not until December 23 that the Vice-President, pursuant to the special order, laid the bill before the Senate, but Senator Fitzpatrick of Alabama again moved that it be postponed. He referred to the continued absence from the capital of Senator Pugh and Senator Johnston, and denied the statement made early in the session by Senator Stuart, that the bill had been favorably reported from the Committee on Public Lands. Senator Stuart replied that it had received the sanction of the committee. It was true, he said, that at the formal vote on the report of the bill, the committee was a tie, but since then a senator on the committee who had not voted had given his adherence to the bill. The Senate, by a vote of 28 to 20, laid the bill aside.

The measure did not again appear upon the records of the Senate until February 1, 1859. On that day Senator Benjamin F. Wade of Ohio asked the Senate to consider the bill, and appealed to the Senate to "do something for agriculture." Forgetting that the bill had passed the other chamber by a margin of only five votes, Senator Wade urged as a reason for favorable consideration that "it has received the sanction of the House of Representatives by a great majority." Voting 30 to 26, the Senate agreed to take up the bill, and Senator Pugh of Ohio addressed the Senate in opposition.

Senator Pugh denied the constitutionality of such a grant as was proposed by this bill, and quoted President Pierce to the effect that there were but two precedents for such action: in 1819 Congress had granted a township of public land to Connecticut for an asylum for the education of the deaf and dumb, and in 1826 a similar grant had been made to Kentucky for an insane asylum. In the Thirty-third Congress it was true that both Houses had passed a bill making a grant similar to the one contained in the pending measure, only that the grant then was to the states for insane asylums instead of for agricultural colleges. The Houses had been unable to resist the

eloquence of the gentle philanthropist who had pressed upon them the horrors suffered by the unfortunate insane. President Pierce, however, had vetoed the bill in an able state paper, which showed that Congress had no constitutional power to take such action, and Senator Pugh avowed that he had been induced by emotion to give his vote for the bill. President Pierce had said that if Congress can care for the insane in the states, it can care for every species of infirmity, and Senator Pugh said that in like manner, he felt that if Congress can assist the states in regard to agricultural education, it can do so for every species of education, and gradually take the whole of this most important matter into the power of the federal government. In any case, "this bill is not for the promotion of agriculture, through the agency of the state governments. Beyond the title there is nothing of the sort to be found in it."

Senator Pugh also argued against the bill because he said that he was opposed on general principle to land grants. The land should all be reserved for actual settlers. The effects of land grants were always pernicious. He discussed the details of the management of land grants to show the difficulty of guarding them from fraud, and declared that they always worked for corruption in the community and against the interest of the home-seeker. The bill before the Senate, Mr. Pugh said in conclusion, was the final evidence of this. He reviewed its surprising passage thru the House after the Committee on Public Lands of that body had decided against it, and declared that the pressure exerted now upon senators to secure its passage here was due more to the desire of speculators to become assignees of the land scrip than to fervor for agricultural education. The Senate refused to recommit the bill to the Committee on Public Lands by 28 to 27.

Senator Rice of Minnesota objected to the bill as unconstitutional, or at least unjust. He asked whether the grant of federal lands and franking privileges for the distribution of the college reports would not tempt the states to rely entirely on the national treasury and surrender their sovereignty to the general government. "If you wish to establish agricultural colleges, give to each man a college of his own in the shape of one hundred and sixty acres of land, where he and his children can learn how to make it yield the fruits of the earth in the greatest abundance; but do not give lands to the states to enable them to educate the sons of the wealthy at the expense of the public. We want no fancy farmers; we want no fancy mechanics; but we do want homes for the working artisans and the cultivation of the soil."

Senator Mason, afterward so well known from his capture on the "Trent," was of the opinion that there was no difference between a vote of the public lands and a vote of money directly out of the treasury. Both were property, and if the federal government had a right to give away one species of property, it had a right to give away another for the same purpose. According to the principle of this bill, the government at Washington could practically take over the entire charge of all the education of all the states. Senator Mason closed with a long and vehement denunciation of the "encroachments of this federal government." He knew, he said, that expos-



ure of such encroachments would have no influence in the Senate, but he desired the people of Virginia to know what measures were being discussed and undertaken in that body.

Senator Harlan of Iowa expressed his view that the bill was constitutional, and said that he desired to see the intellect of the man who sweats cultivated so that he could be represented in "this Senate" by one of his own kind.

Senator Jefferson Davis, while saying that he did not rise to discuss the bill, raised several new points. He disputed the claims that the government should educate the future farmer in the same way that it educates the future soldier and sailor. The latter had already entered the service of the country; their education was not given to them in order that they might be better able to choose the career of the soldier or of the sailor. There was, therefore, no analogy between the schools in which the government trained the young officers in its military and naval employment, and the proposed schools in which civilians were to be fitted for some profession for their own advantage. The bill, in his opinion, was "delusive, not to say fraudulent." The farmer himself did not need such legislation. "The agricultural interest takes care of itself, and is drained to take care of every other pursuit in the country. I have looked upon it as a mere sham for other pursuits draining and to drain the agriculturist, to come and say, 'Let us do something for the agriculturist.'" He then discussed the entire question already raised by others, of the nature of the federal government and the rights of the states under the Constitution, a topic of contemporary politics to which several speakers following Senator Davis addressed themselves. The subject involved two aspects — had the federal government the power to interfere with the rights of the states, and the right to "dispose" of the public lands by giving them away? If it possessed the latter right, why should it restrict the expenditure of the proceeds to education in agriculture and the mechanic arts rather than in law or divinity or medicine?

The following day, February 2, Senator Wade again called up the bill, and said, "I hope the friends of the bill will not delay action upon the subject any longer by debate." Senator R. M. T. Hunter of Virginia, a former Speaker of the House, and later one of the Commissioners of the Southern Confederacy to the fruitless Peace Conference at Hampton Roads, moved to lay aside the agricultural college bill and take up the Indian Appropriation bill, of which he was in charge. This the Senate declined to do by a vote of 29 to 28, but immediately thereafter, upon the motion of Senator Pugh, pending from the previous day, the agricultural college bill, by a vote of 28 to 26, was recommended to the Committee on Public Lands.

This was a staggering blow to the friends of the bill. To recommit a bill to its committee at any time is generally tantamount to killing it; to take this action in the last month of the short session would leave only the most optimistic with any hope. The supporters of the measure, instead of being in despair, evidently fell to work, for after the Senate convened on the following day, February 3, the Senate agreed to Senator Wade's motion to postpone prior orders and take up the agricultural college bill.

Thereupon Senator Gwin of California, who on the afternoon before had voted for the recommital, moved that the Senate proceed to the reconsideration of the vote on the agricultural college grant bill of the previous day. This motion being carried 28 to 27, the bill was again regularly before the Senate. A number of amendments were discussed, and there seemed every probability that the bill could come to a final vote on that day, when Senator Clay of Alabama arose. He desired very much to be heard on the pending bill, but he felt exceedingly indisposed and would greatly prefer to speak on some subsequent day. On the understanding that he himself would call up the bill, the Senate proceeded to other business.

On February 7, four days later, Senator Clay carried out his promise, and calling up the bill, declared his opposition to it on a number of grounds. "I do not believe," he said, "that the honest tillers of the soil desire the patronage of Congress. I know I speak truly, when I say for those in my own state, that all they ask is sheer justice and no favor. They ask that you let them alone to work out their own progress; that you will keep your hand out of their pockets and let them appropriate their own honest gains, instead of filching them for the benefit of other interests." He pointed out that the financial condition of the federal government made this a singularly inopportune time to make great grants of the public resources, which should be husbanded and not wasted. He then took up the constitutional argument. His whole contention was that "the powers asserted in this bill are hostile to the reserved rights and the true interests of the states." While it may have added southern votes against the bill, Senator Wade must have been pleased to see the Senator from Alabama driving practically all the northerners into the affirmative camp.

Senator John Bell of Tennessee, soon to be the "Constitutional Union" candidate for the presidency in the campaign of 1860, took distinctively the Whig point of view. He could see no constitutional difference between a grant for agricultural education and a grant for internal improvements, and as the constitutionality of grants for internal improvements was now no longer a disputed question, he could not appreciate such constitutional arguments against the pending measures as the Senate had just heard. He would vote for the bill.

Probably the most remarkable speech delivered during the time the bill was before the Senate was then made by Senator Brown of Mississippi. Senator Brown occupied the singular position of a strong Union man in the South. A few years before he had made a successful campaign for governor of Mississippi on the single issue of preserving the Union against his present colleague in the Senate, Jefferson Davis. He told the Senate that he would vote against the bill because the people of Mississippi were strongly opposed to it, and he considered that a senator should carry out the wishes of his constituents. As a supporter of the bill, however, he pointed out in a few forceful sentences the absurdity of the notion that such a grant as this bill contemplated would interfere with agriculture in the states, or would bring all the farmers in the United States under the despotic heel of the federal government. The farmer



would go on his way after the passage of this bill as he had before. And as to the constitutional argument against grants of public lands to the states, Senator Brown said that he could not appreciate such finely drawn distinctions. The states, thru their partnership in the federal government, now owned the public lands in the aggregate. Why was it not equally constitutional for the states to own the same lands in severalty? Such a transfer of ownership was all that the bill contemplated. He would, in obedience to the views of his people, vote against it, but the speeches that he had heard on the floor of the Senate about the bill overturning the nature of the federal government and impairing the constitutional bond between the states, seemed to him unworthy of consideration.

Before calling for a vote on the bill Senator Wade made a final appeal to the supporters of the bill, not to talk but to vote. "I hope that the friends of the bill will now permit the vote to be taken. I do not think any more light can be thrown on it by discussion." Senator Jefferson Davis, concurring with the views of Senator Clay, summed up the views of the states rights senators, and the bill came to a vote on its final passage.

Upon this final vote, twenty-five senators voted in favor of the bill, and twenty-two senators voted against it. The bill was thus passed. The twenty-two votes in the negative included eighteen senators from the slave-holding states, with Pugh of Ohio, Rice of Minnesota, Shields of Minnesota, and Jones of Iowa, northern democrats. While the debate in the Senate occupied many hours, the educational features of the bill were actually less discussed than they had been even in the House, where "the previous question" had cut off debate. Mr. Morrill had made some reference to agricultural education in his speech in the lower chamber, but in the Senate, thru the turn the southern senators had given to the discussion, no attention whatever had been paid to that question. The bill had simply afforded another opportunity for a discussion about the Constitution and states rights. The supporters of the bill, with the exception of a little rhetoric from Senator Harlan of Iowa and a few of the old Whig constitutional arguments from John Bell, had not enlightened the Senate or the country concerning the nature of the agricultural education proposed. They had kept their seats quietly and, when the time came, voted.

President Buchanan vetoed the bill. In his veto message, signed on February 24 and transmitted to the House of Representatives on February 26, 1859, the President gave six grounds for his disapproval of the measure:

First, the bill was financially inexpedient at this time. The federal government was, as Congress knew, having great difficulty in meeting its expenses, and every available source of income ought to be utilized. The revenue from sales of public lands, it was estimated by the treasury officials, would amount to five million dollars during the ensuing year, and that sum of money was then of moment to the treasury in its present depleted condition. If the bill became a law, the lands granted by it to the states would naturally come under the market at about the same time, and

the market would thus be glutted. The federal government would therefore be deprived of nearly all, if not all, of the five million dollars which it counted on receiving from the sale of public lands in the following year.

Second, The fact that the bill was pressed at a time singularly inopportune for the needs of the United States Treasury to be disregarded, showed how dangerous a financial precedent the bill would create. Instead of the financial operations of the federal and state governments being kept distinct, as good statesmanship required, the measure proposed to mingle them confusedly. Let the states once get into the habit of receiving aid from the federal treasury, and they would continually ask it for all kinds of measures, regardless of the condition of the federal treasury at the time. If a state appropriated money for a certain object, the legislature had to find the money equal to that expenditure, and that it could do only by taxation. The people felt such direct taxation, and would resent it if the appropriations by the legislature were extravagant. But for the state legislatures to call upon the federal treasury to distribute money to them, instead of increasing the taxation by the state, might possibly decrease it, and for taxation by the federal government the people would not hold the state responsible. Therefore the policy sought to be inaugurated by the bill, by confusing the financial spheres of the federal and state governments, would be a policy tending to create a constantly increasing pressure upon the United States Treasury. Such a tendency could be easily discerned from the lack of appreciation then shown over the straitened condition of federal finances.

Third, The bill would be prejudicial to the settlement of the new states, which needed above all things actual settlers, occupying small portions of land. The lands assigned to the states under the bill would pass largely into the hands of a few holders, who would hold the land in large tracts for speculative purposes. Nothing could be worse for a new community than the withdrawal of large portions of land from settlement by vesting the title in non-residents who cared only for the profit they could make out of their holdings.

Fourth, The federal government, which would make the donation, had confessedly no constitutional power to follow it into the states and enforce the application of the fund to the intended objects. As donor the federal government would possess no control over the gift after it had passed from its hands. The bill contained a stipulation that the sum received by a state from the sale of the lands granted to it should always be maintained inviolate by the state, the income to be used for the teaching of such branches of learning as are related to agriculture and the mechanic arts. But suppose the state failed to execute the trust faithfully in the manner prescribed by the bill. "The Federal government has no power and ought to have no power to compel the execution of the trust. It would be in as helpless a condition, as if even in this, the time of great need, we were to demand any portion of the many millions of surplus revenue deposited with the states for safekeeping under the Act of 1836."



Fifth, The bill would injuriously interfere with existing colleges in the different states, in many of which agriculture was taught as a science, and in all of which it ought to be so taught.

Sixth and finally, The President said that the bill was unconstitutional, because it went beyond the power of Congress to use the public lands for any purposes other than those enumerated in the Constitution, and education in the settled states was not one of the purposes enumerated. "I presume the general proposition is undeniable, that Congress does not possess the power to appropriate money in the treasury, raised by taxes on the people of the United States, for the purpose of educating the people of the respective states." Land owned by the United States government and derived from occupation of territory by the governed differed in no essential respect from money in the treasury raised by the government by means of taxation. Both were property. What it was unconstitutional to do with one was unconstitutional to do with the other. Therefore, waiving entirely the financial and political grounds on which he considered the bill defective, as the bill was also an exercise by Congress of a power lying outside those conferred upon the federal government by the Constitution, the President felt it his duty to return the bill without his approval.

As soon as the reading of the President's message was finished in the House, Mr. Morrill arose. His remarks indicated keen disappointment. He accused the President of having vetoed the bill from partisan motives, and ridiculed the constitutional and financial arguments advanced in the message. "But, if the position of the President were correct, it comes with an ill grace from the magistrate who wasted more than ten million dollars in the grand march of the army to Utah, who is wasting a larger sum by the grander naval demonstration against Paraguay, and who would waste \$30,000,000 more in the grandest of all propositions — for snatching Cuba." He told the President that the agricultural communities would resent this veto, for the bill "is a measure dear to the hearts of all farmers, old and young." But the President could exult in the unhappiness he had spread thru the rural districts. "The telegraphic news of this veto will start a tear from the eyes of more than one manly boy, whose ambition will now be nipped in the bud. Our great object was to arrest the degenerate and downward system of agriculture by which American soil is rapidly obtaining the rank of the poorest and least productive on the globe and to give to farmers and mechanics that prestige and standing in life which liberal culture and the recognition of the Government might afford. To all this the President turns a deaf ear." On concluding his speech Mr. Morrill, without giving any one else an opportunity to say anything, on either side, demanded the previous question. The previous question was ordered, and the bill put upon its passage over the President's veto. The vote stood 105 to 96, and a two-thirds majority not having been given, the President's objections stood and the bill did not pass. It is interesting to note that it was by this number of 105 votes that the bill was originally passed by the House in the spring of 1858.

This veto ended all possibilities of a grant to the states for agricultural education not only in the Thirty-fifth Congress but also during the Thirty-sixth Congress. As long as Mr. Buchanan occupied the presidential chair it was futile to think of enacting such a proposal into law. Mr. Morrill therefore did not even introduce his bill again during the next two years. But on the assembling of the Thirty-seventh Congress Mr. Lincoln was President, and on December 9, 1861, a week after the convening of that Congress in regular session,<sup>1</sup> Mr. Morrill gave notice in the House of Representatives that he would introduce a bill "donating lands to such states as shall establish colleges for the benefit of agriculture and the mechanic arts." On December 16 he introduced the bill (H. R. 138), which was referred to the Committee on Public Lands and ordered to be printed.

The committee was by no means the same Committee on Public Lands which two Congresses before had considered Mr. Morrill's bill. Not only had its composition been altered by the vicissitudes of two eventful elections and the whims of two successive Speakers, but its membership felt the disappearance of one party from national affairs and the rise of another party out of obscurity into predominance in the House. Events more unsettling than nominating conventions and electoral campaigns had changed the occupants of the committee chairs. Half of the men who four years before had faced the chairman down each side of the long table were now addressing a Congress which met under a hostile flag, or were leading into battle a hostile army. Yet, despite these changed conditions, the Committee on Public Lands of the Thirty-seventh Congress entertained the same unfavorable opinion of federal grants for agricultural education as had its predecessor, when the Whig party still held national conventions and senators from South Carolina and Louisiana still came up to the capital. The committee ordered Mr. Potter of Wisconsin to report the bill adversely.

When, on May 29, Mr. Potter presented this report to the House, Mr. Morrill did not, as he had done under similar circumstances in the Thirty-fifth Congress, endeavor to secure consideration for the bill. The reason for this was that in the Senate a favorable report had just been returned from the Committee on Public Lands, and it was better parliamentary tactics to press the bill in the chamber where a favorable committee report was behind it than in the chamber to which the bill had been returned with the disapproval of its committee. In this Congress the proceedings in the Senate must therefore be considered before those in the House.

The bill (S. 298) was introduced into the Senate on May 5 by Senator Wade. It was similar in its provisions to the bill which President Buchanan had vetoed in the Thirty-fifth Congress, except that the grant to each state was to be thirty thousand acres for each senator and representative instead of twenty thousand acres. The apportionment under the census of 1860 instead of that of 1850 was, of course, now to be the basis of calculation. The bill was referred to the Committee on Public Lands,

<sup>1</sup> This was, however, the Second Session, Congress having been convoked in an extraordinary First Session in July, 1861, on account of the war.



and on May 16, Senator Harlan of Iowa reported it back favorably with amendments. This is the only favorable committee report which the bill ever received in either branch of Congress.

It was on May 19 that the Senate, on motion of Senator Wade, first took up consideration of the measure. Some amendments recommended by the Committee on Public Lands were adopted, and then Senator Lane of Kansas requested that the bill be laid aside. Certain provisions of the bill were of great importance to Kansas, and he wished to examine the bill carefully. Altho Senator Wade pointed out that the bill was the same as that passed two years earlier with the support of Senator Lane's colleague, Senator Lane insisting upon his right to examine the measure, the bill went over. On May 21, the bill again came up in the morning hour, and Senator Wade again said that he hoped the bill would be passed without discussion; it needed no discussion. Senator Lane insisted upon making a speech, however, and was followed by other senators. The discussion was entirely upon the effect the passage of the bill would have upon the disposition of public lands in Kansas, and the morning hour expiring, the bill again went over.

On May 22, May 24, May 28, May 30, and June 10, 1862, the bill was considered in the morning hour of the Senate, but the discussion was entirely confined to the question as to what effect the grants of the public lands provided for by the bill would have upon the new western states in which most of the lands lay. Senator Wade was constantly urging the Senate not to debate the bill, but to vote upon it, and on several occasions Senator Fessenden of Maine reminded the Senate that unless the bill was disposed of within a few days, he would be forced to ask that it be laid aside, as the bill for raising money for the support of the financial operations of the war was upon the calendar, and it was imperative that it be considered soon. But several senators from western states were very solicitous concerning the "gobbling up" of their lands by the eastern states, and despite the appeals of Senator Wade and the warnings of Senator Fessenden, the bill continued before the Senate during the morning hours of the days mentioned.

This discussion of the public land features of the bill resulted in the adoption of several amendments, which became part of the measure as finally enacted into law. On motion of Senator Lane of Kansas it was provided that not more than one million acres of land should be located in any one state under the bill, and also, on motion of the same senator, the location of any land was not to be made until one year after the passage of the bill. Senator Pomeroy of Kansas offered an amendment that all the scrip for the public lands issued under this bill should bear upon its face statements that it was issued under this law, that no assignment of the scrip should be valid unless the assignment was annexed to the face of the scrip, and furthermore, that no one person should receive any assignment for more than six hundred and forty acres. The amendment was adopted by a vote of 20 to 19. Upon this vote being announced, Senator Dixon asked for a reconsideration, as he had voted under a misapprehension,

and Senator Wade declared that he was satisfied with this amendment if the Senate was, but that he served notice that he would insist upon exactly similar provisions being inserted in the bills making grants in aid of the construction of the Pacific Railroads, which would soon come before the Senate. Immediately, by a vote of 25 to 15, the Senate voted to reconsider the adoption of Senator Pomeroy's amendment, which was rejected. Upon motion of Senator Collamere of Vermont the grant to a state was not to be effective unless the legislature of the state accepted the measure within two years after its passage. Upon motion of Senator Howe of Wisconsin it was agreed that governors of states should be directed to make annual reports to Congress concerning the public lands until the whole of the public lands granted was disposed of, giving the details concerning the sale of the lands, how much had been received therefor, and what appropriation had been made by the states of the proceeds.

During these debates on the public land grant contained in the bill a few words were spoken on the educational character of the measure. On May 22, Senator Wade told the Senate that the public interest in the bill was very great, and that he thought that most of the free state legislatures had instructed their senators "to go for this bill." He knew that Ohio had. On May 28, Senator Wilkinson of Minnesota, speaking in opposition to making over vast tracts of lands in his state to the old states, declared that it was absurd to give over a hundred thousand acres of the public lands to Rhode Island. Rhode Island, which in 1850 had raised forty-nine bushels of wheat, would not take much interest in an agricultural college. What the new states wanted was settlers, and if education must be provided, then common schools and colleges should be established. On May 30, Senator Wright of Indiana declared that if the money from these grants was to be used for education, then it would far more sensibly be devoted to educating daughters and sisters of those in the army to be self-supporting. On June 10, Senator Howe of Wisconsin wanted to know, if the general government could make appropriations in aid of agricultural education, why it could not do so for all education. He could not see any constitutional difference between one kind of education and another, and he was opposed to the general government assuming charge of any species of education, even if it was agricultural. To this Senator Harlan of Iowa retorted that it ill became an assembly consisting mostly of lawyers to begrudge to the sons of farmers a scientific agricultural education. These remarks, with a few references to the clause of the bill, "at least one college in each state," were the only occasion on which the educational character of the measure received attention. Several senators assumed that under the provisions of the bill each congressional district would receive one college, with two additional colleges for the state at large.

By June 10, the discussion concerning the effect of the land grants had run itself out, and the Senate came to a vote on the passage of the bill. By a vote of 32 to 7, the bill was passed, the seven negative votes being cast by Senators Doolittle of Wisconsin, Grimes of Iowa, Howe of Wisconsin, Lane of Kansas, Saulsbury of Dela-



ware, Wilkinson of Minnesota, and Wright of Indiana. The seats of the senators from the southern states were not occupied in this Congress.

The bill thus passed by the Senate was received in the House of Representatives on June 11, and laid upon the Speaker's table. On June 17, Mr. Morrill, now one of the leaders of the dominant party, moved that the bill be taken up and passed. After several attempts by Mr. Potter to secure a committal of the bill to the Committee on Public Lands or a postponement of the vote had been frustrated, the House passed the bill by 90 to 25. On July 2, President Lincoln affixed his signature to the bill, and the plan of federal assistance to the states for agricultural education was turned into a law.

#### ANNUAL GRANT AUTHORIZED BY THE ACT OF 1890

THE grant of public lands provided for in the act of 1862 was soon accepted by the legislatures of the states loyal to the government, and after the end of the war benefits of the grants were extended to the states which had been out of the Union when the act became a law. The grant was accepted by each state under the obligation that nine-tenths of the money derived from it should be preserved by the state forever as an inviolable fund whence instruction in the subjects mentioned in the law should be maintained; the remaining one-tenth of the proceeds of the grant, but no more, could be used by the state, in its discretion, for buildings and other equipment proposed.

The predictions of those who opposed the original Morrill bills on the ground that they would inevitably be followed by further demands for money were soon justified. Numerous supplementary bills of an administrative character were passed during the decade following the enactment of the first Morrill bill, but in 1872 the campaign for additional funds, in which Senator Morrill himself was to lead, was launched. He made ineffectual attempts during the Second Session of the Forty-second Congress to bring up the bill (S. 693), which "has been presented to me by a committee representing a convention that recently assembled at the Agricultural Department, a convention of high character, and hardly ever surpassed in this country for their intelligence." The convention here mentioned consisted of delegates from agricultural colleges, and state agricultural and horticultural societies, convened by the Commissioner of Agriculture. Senator Morrill was present as the representative of the State Agricultural College of Vermont. The bill was referred to the Committee on Education and Labor on February 23, and was reported back with amendments on March 11. Under pressure of business, however, no opportunity could be found for a discussion before the close of this session. On the opening day of the following session, December 2, Senator Morrill gave notice that he would submit some remarks on the bill, and on December 5 he introduced his bill (S. 693) "to provide

for the further endowment and support of colleges for the benefit of agriculture and the mechanic arts, and the liberal and practical education of the industrial classes in the several pursuits and professions in life, as established under an act of Congress approved July 2, 1862." The whole amount of land scrip issued under the act up to 1871 was 7,636,588 acres, but this had not been satisfactorily administered. The new measure proposed the grant of the proceeds of half a million acres of the public lands to the colleges in each state and territory; the method of administration differed from that under the original act. The lands were to be held by the United States Government until sold, and when sold the proceeds were to be invested in United States five per cent bonds, to be held by the Treasurer of the United States for the benefit of each of the colleges, and the interest accruing was to be paid them semi-annually. This method was considered to have the advantage of assuring the highest security to the colleges, while the federal government would keep a lien on the funds "to compel substantial and satisfactory compliance with the conditions and limitations of the original land grant, as well as those of the present amendment. The funds can never be squandered or misapplied." Senator Morrill expected that the grants would in time yield an annual income of \$30,000. The land grant colleges, he declared, had already proved successful and showed promise for the future. "Engineers, chemists, geologists, miners, surveyors, bridge-builders, draughtsmen, overseers, superintendents, in all our broad, busy country are greatly needed, and practical science—technical education—leads the way and finds cordial appreciation. . . . Many of those here trained will be fired by the ambition to make the profession of teaching a life pursuit, as one of the highest and most honorable among men. Thirty-seven of these institutions will not add too many scientific teachers to those whom we now have for forty million people, and with good and fit teachers, the great problem of good schools will be at once more than half solved, and cannot otherwise be solved."

Taking up the question "whether mental training should be mainly literary or mainly scientific," Senator Morrill made the only pronouncement on educational values that is found in any of his speeches in Congress on the subject of the land grant colleges. He urged that by the act of 1862 "it was clearly intended that these national colleges should place scientific or practical studies foremost as the leading object, and whatever else might be added, that these were in no case to lag in the rear." "Knowledge not for use may do for useless philosophers, of whom the United States has, perhaps, too little appreciation, and postpones to a more convenient season. But here education embracing the largest numbers must have such scope as to practically fit the owner for his destined vocation. Its backbone will be made up with what will be most needed." The old classical education had been accepted in this country along with other English traditions, but, he asked, "Are we never to create anything and so remain forever hopelessly in debt to ancient languages?" Since the great need of the country was a good general average of education, "let the American Congress, then, not hold back any measure that tends to relieve future peril, or that will lift



up the intellectual and moral standard of the young and industrial classes of our country." Adequate preparation against foreign aggression was being made in the land grant colleges by the provision of military drill. "Our popular form of government, however peacefully disposed, does not challenge the hearty sympathy of other less popular Governments. Peace may not forever be possible; and we must remember that in war victory follows neither the greatest nor the most guns, but follows the party which can make and knows how to use the best—does not follow absolutely the largest army, but the best handled and the most sagacious. All of these national colleges are to give some military instruction, and this, so widely diffused and multiplied, in any great future war, will be of vastly more service than even our present Naval and Military Academies, however admirably they may be conducted. In time of peace and without annual appropriations, we shall have made our best preparations for war." "But we want a system of broader education for the American people in the arts of peace," especially in agriculture and the mechanic arts. Something was being done in these fields of study, but not enough.

His bill aimed to distribute the proposed benefits on a basis of equality instead of representation as in the act of 1862, so that "ample protection should be given to all alike—not most to the oldest and richest, nor least to the youngest and weakest of the sisterhood." Owing to the migratory habits of the people, college benefits are never confined to one state. To provide for Americans "that knowledge and virtue which shall give to them the foremost rank among men," he was proposing the further endowment of the land grant colleges, by the distribution to each state and territory of the proceeds of 500,000 acres, the land to be estimated at \$1.25 an acre. In spite of the amount of the public lands already disposed of and the need of husbanding the rest, could there be "a safer, more serviceable and desirable disposition of a few million acres of the remainder of the public lands—not amounting to four per cent of what we have left—than to devote that much to the purposes of the bill now under consideration?" Senator Morrill brought his plea for the bill to a close with the optimistic statement that "a great part of legislative work accomplishes its utmost purpose and is obsolete at the end of the year, but here is work that we may fondly hope will endure for ages. There will be no immediate splendor, but a spark will be lighted which may illumine the whole land and lift a cloud from the pathway of the sons of toil, regardless of ancestry or race, that will open to them higher spheres of service and honor, give to republican institutions a more enlightened and enduring support, and make a nation which shall not only desire to live, but deserve to be immortal."

When the bill came up for consideration on January 13, 1873, Senator Sherman of Ohio drew the attention of the Senate to the importance of the bill, and asked the Senate not to regard as a minor matter the appropriation of \$34,500,000 (corrected later to \$28,750,000), the proceeds of the sales of the public lands, to support agricultural colleges. He based his objections on four grounds: First, an expenditure of such sums at a time when the national expenditures were beginning to equal the

receipts was unwarranted. Secondly, the fund, if distributed, should be apportioned according to population in the proportion that taxes would be levied. Thirdly, "The whole principle of this bill is wrong. The attempt to scatter these agricultural colleges into commercial states, into mining states, into banking states, into all kinds of states, it seems to me is utterly idle." Finally, the bill was the entering wedge for a national system of education interfering with the rights of the states.

Senator Frelinghuysen of New Jersey strongly supported the measure, which he thought would correct some of the defects of the original bill by providing an adequate endowment to be distributed on the basis of equality. The income from the grant of 1862 was small or unreliable, New Jersey, for example, only realizing \$6960 annually, and a college, once established, needed as much money in a small as in a large state. "The public lands should be appropriated to the promotion of education because the property to be appropriated is that of the public, and the only proper use that can be made of it is to devote it to a permanent public beneficial purpose."

A strong note of opposition was sounded by Senator Thurman of Ohio, who supported the plea of his colleague for economy. The bill was a mere blind to take money out of the treasury. "A bill that could not pass if it provided for taking money right out of the Treasury, without saying anything about the public lands, is expected to pass, if you call that money the proceeds of the public lands." This was not the time to vote away money "as if this Government did not owe a dollar, as if money was as plentiful as the leaves of the forest, as if there were no cry from one half of this Republic, as there is at this moment, that the stringency of the money market never was equalled within the knowledge of man in the United States—and my friend from Vermont will find that this is the cry from every state west of the Alleghany Mountains—as if there was nothing in the world to do but to pass appropriation bills." In any case he was opposed to the distribution of the funds according to states equally, and to the attempt of the federal government to promote education without any conception of the cost of such an undertaking. In spite of the reports to the contrary, he was not sanguine about the success of the land grant colleges. "I am satisfied that many of them are what commercial men call 'lame ducks,' and I do not know but what I should be willing to help splinter their lame legs a little, but I cannot do it by such a bill as this."

After some further interchange of opinions and the passing of a few unimportant amendments, Senator Sherman, to test the sense of the Senate, offered an amendment to pay the proposed grants to common elementary schools, as affording the broadest foundation and most useful channel for such expenditure. Senator Buckingham of Connecticut, however, favored the support of high schools and pointed to the beneficial influence of the land grant college in Connecticut. He believed "that if you will establish similar schools in all parts of this country you will elevate the cause of education, and send into the country more practical and more energetic men than you have ever had. This will not interfere with the common schools, but will benefit



them." The attitude of the Senate was shown by its rejection, 32 to 9, of the Sherman amendment. Another amendment by Senator Sherman to refer the bill to the Committee on Public Lands was also rejected, 36 to 11.

An attempt by Senator Hamilton of Maryland to divert the debate by the old constitutional and states rights argument received no attention. The proposed grant "is but the beginning of the end. We are to have this central government monopolize all the powers of the states, control all the local institutions of the states, and regulate and direct them in the interest of centralism, and to the utter subversion of our republican form of Government." A similar fate befell the more important point that there was a discrepancy between the original act and the present bill, in that the former left everything to the state and the latter placed the colleges in direct relation to the general government.

An amendment proposed by Senator Stewart of Nevada to permit his state to establish a mining school instead of an agricultural college turned the debate into an interpretation of the requirements of the act of 1862. Senator Morrill declared that "this bill does not propose to establish an agricultural college, and therefore it is a misnomer to so state in the amendment. The bill proposes merely to provide schools for the benefit of agriculture and the mechanic arts"—an interpretation that he was to broaden later. Senator Sawyer of South Carolina supported Senator Morrill with the statement that "it is perfectly obvious that every state has the power under this act of appropriating the money in such a way as, while it meets the general requirement of the act, may carry out some specific requirement of the people of their own state." On the other side it was felt that since under the original act classical and scientific studies and military tactics could not be excluded and agriculture must be included, the grant could only be diverted to a school of mining by special provision. Before this interesting question could be determined, the Senate voted, 22 to 21, to proceed to the consideration of executive business. On the following day Senator Stewart withdrew his amendment, and the discussion turned largely on the general question of the distribution. One side held that distribution on any basis but that of population was unequal, and the other maintained that it cost as much to establish and equip a college in a small state as in a large state, and that since the colleges all over the country would be open to all, there would be a certain leveling up or down as might be necessary. Senator Morton of Indiana, for example, urged that "Six hundred and twenty-five thousand dollars will go much further in educating the school children in a state with only three hundred and twenty-five thousand people than it will in a state where they have four million people." Senator Morrill, who in the course of this debate objected to the use of the term "agricultural colleges," preferring to speak of "national colleges," urged that equality of distribution was desirable to encourage the smaller states to establish colleges, that a college in every state would make education cheaper, and that colleges in the larger states could rely on wealthy benefactors to add to their endowment.

The Senate had evidently made up its mind by this time to pass the bill. A number of amendments were proposed which included a proposal by Senator Tipton of Nebraska to permit the states to select lands in lieu of their share in the proceeds of the federal sales, and one by Senator Vickers of Maryland to place the grants in the hands of the states instead of the trustees of the colleges. All the amendments were rejected and the bill was accordingly read for the third time and passed, 39 to 14.

In the House of Representatives the bill was sponsored by Mr. Legrand W. Perce of Mississippi, who moved on February 10, "to suspend the rules so as to take from the Speaker's table and pass, with an amendment in the nature of a substitute, the bill (S. 693)," etc. On this occasion Mr. Perce failed to secure the two-thirds affirmative vote to suspend the rules. On February 17, however, a similar motion was agreed to and the bill was rushed thru to its third reading and passed, 120 to 71. Sharp practice was suspected, for Mr. Perce, as soon as he obtained permission to bring up the substitute bill, moved the previous question, and refused to admit any amendments, a course which elicited the remark from one member that "This looks very much like a trick." The substitute differed from the original bill in including within its scope the District of Columbia, and in providing that the treasury annually appropriate one-fourth of the proceeds of the sales of the public lands to be invested and allotted to the states in equal portions up to a maximum of \$50,000, and that there should be established in each college a free scholarship for every \$500 of income.

When Senator Morrill called up the bill in the Senate on February 24, "for the purpose of concurring in the amendment made by the House of Representatives," it encountered even stronger opposition than on its previous appearance. Senator Windom of Minnesota proposed to refer the bill to the Committee on Public Lands on the ground that the cost involved would be too great, while Senator Conkling of New York was opposed to the hasty consideration of an important bill in the last few hours of Congress. Senator Stockton was even more specific in stating his objections. The bill was an attempt to give away good lands that were needed for homes; it discriminated in favor of certain colleges; and there was no demand for agricultural education and no one to teach it. Senator Sherman objected, as before, on the ground of the cost involved and because the bill made a permanent appropriation. So far as he recalled, there was only one record of an attempt to appropriate the proceeds of public lands permanently. "In the old contest between the Whigs and Democrats, at a time when money was flowing over in the Treasury, when we were collecting much more than was necessary, it was the Whig idea to appropriate the proceeds of the public lands among the States, and a bill was passed for that purpose intended to be permanent. Mr. Clay, on the floor of the Senate, advocated the idea of a perpetual distribution of the proceeds of the public lands among the States, and that bill passed, I think finally passed, over the veto of President Jackson. . . . How long was it before it was repealed on account of the change in the financial condition of the country? In two or three short years." He objected also to the policy of



equal distribution and the discrimination in favor of the new colleges which would be in position to compete with the old. Finally, the bill was being rushed thru in the last days of Congress without the Senate fully understanding it. He proposed an amendment, that "Congress may at any time alter, amend or repeal this act." In his reply Senator Morrill pointed out some inconsistencies in his opponent's statements, but was more anxious to draw attention "to the persistence on the part of some Senators in calling these colleges 'agricultural colleges.'" What was provided by the act of 1862 was "a broad education, intended to be sure to reach the agriculturist and to reach all our industrial classes." No sooner was Senator Sherman's amendment lost than a number of other amendments were put forward, a new one making its appearance as soon as the old was defeated. This prompted Senator Morrill to say, "I regret that this system of tactics is adopted after so long and patient a hearing on the whole subject—this system of continuous amendments obviously intended, or, if not intended, which have the effect of procrastinating the time when this bill shall be finally considered, and mainly for the purpose of wearying the Senate so that the bill may be disposed of without being passed." These remarks, however, did not deter the opposition. Senator Thurman again returned to the attack with the statement that the paltry endowment proposed was not sufficient to establish even a small college. "But again, sir, as a practical measure, and in regard to all these agricultural colleges, I should like some Senator to get up and tell me what he understands by an 'agricultural college.' . . . If it is not to be a place in which practical agriculture is taught by manual labor, but simply theoretic agriculture is taught, I should like to know wherein it differs from any good college there is now in the United States in which applied chemistry, applied mathematics, and applied mechanics are taught, and botany, and all. . . . I happen to know a board of trustees of an agricultural college, and they have been pondering ever since they were appointed, and I think it is about two years, and they have never been able to this day to decide what an agricultural college is." He had stronger reasons for opposition to the measure than doubt about the meaning of an agricultural college. "Let nobody say that I am opposed to agriculture. How could I be? Why, sir, it is the great industry of my State and my State is one of the most remarkable in the whole Union for her agricultural resources; but this is not the way to assist agriculture. If you want to assist agriculture quit subsidizing and protecting every other industry in the country, while you do not subsidize or protect agriculture at all. That is the way to assist agriculture. Take off that heavy hand of taxation that you put upon every agriculturist in this country, for the benefit of other industries. Do that; take off that whip that you have upon the industry of every agriculturist in this country, for the benefit of other people; quit maintaining other industries, or making them profitable by the public money or protective law, and let every industry stand upon an equal foundation in this land, and you will do more for agriculture in one single year than all those institutions will do in a century or ten centuries. No, sir, this is not the way by which

you are to benefit agriculture. . . . It is not by increasing your public debt; it is not by additional taxation; it is not by fanciful benefits to be derived from agricultural colleges, or any such thing that you are to build up the agricultural interests of this country. No, sir, if you want to build them up as you ought to do you must do it by equal and just laws of taxation which shall not tax them for the benefit of other industries." Senator Thurman was not alone in expressing his suspicions that it was not altogether the welfare of the agricultural interests that prompted the measure before the Senate. Senator Windom of Minnesota remarked, "I think we can better appreciate, without any reference to the action of the other House if it is out of order . . . the extreme nervousness of my honorable friend from Vermont in permitting this bill to be further considered by any other body anywhere, for I am satisfied that no body of men, unless they have been instructed by Legislatures or pledged by those having this bill at heart who have an interest in it, would be willing to pass it, without some amendment. I believe there are Senators who, with me, conceive that this bill should be amended, that it is monstrous in some of its provisions, but they feel themselves bound by some sort of obligation, instructions from their States or otherwise, to vote against every amendment." Senator Stockton also joined in the request for further consideration of the bill, but in the absence of a quorum, due to the lateness of the hour, the Senate was compelled to adjourn. On the following day Senators Windom and Thurman again pressed for a postponement or longer consideration. Senator Tipton of Nebraska was even more outspoken and stated openly, "Then the bill is a fraud upon its face; it is a cheat; it is delusion, barefaced and bald as ever was presented for the purpose of gulling an unsuspecting and confiding constituency in this: it says to them 'we are lifting off you the burden of taxation; and yet we have a process by which we take out of your pocket \$50,000,000 and apply it without placing upon you any burden whatever.' Every dollar in the Treasury is pledged for the payment of public debt. Every dollar to-day in the Treasury is under a sacred mortgage. Every dollar taken out of the Treasury for this purpose has to go back in some other form, and when you take out to-day a million dollars and give it to the agricultural colleges, you tax the people a million dollars to-morrow and put the million back into the Treasury to place it under the mortgage from which you released a million yesterday. . . . It is given to the people, and the people are taxed to make it up to themselves! The deception cannot long last and the people will understand how carefully we are guarding their interests here."

An *impasse* was reached and no further progress could be made, when Senator Morrill accepted a suggestion of Senator Windom of Minnesota, that "by unanimous agreement we non-concur in the House amendment and let a committee of conference make such amendments as may be deemed proper, each member of the Senate being at liberty to act as he chooses, of course, when the conference committee reports." This motion was accepted.

The action of the Senate in disagreeing with the House Amendment of S. 693



and asking for a conference on the disagreeing votes was reported to the House on February 25. On February 28 Mr. Perce made two ineffectual attempts to obtain the unanimous consent of the House for the appointment of a committee of conference; he failed again on March 1, and two days later, after the Senate request had been read, himself expressed the hope that no conference would be appointed, and the House deciding the negative, the bill was killed.

Early in the following Congress, Forty-third Congress, First Session, on December 15, 1873, Senator Morrill renewed his effort to secure an additional endowment for his land grant colleges. In introducing his bill (S. 167) he informed the Senate that it was a modification of the bill of the previous session in the mode and manner of distribution and the amount, "so as to meet some of the obligations thus made." The title of the bill is interesting for the reason that a new title is adopted for the land grant colleges and the combination of these with public education. The bill aimed "to provide for the further endowment and support of national colleges for the advancement of general science and industrial education, and to establish an educational fund, and apply the proceeds of a portion of the public lands to the support of public education." The changes in the title were no doubt inspired by an attempt to disarm those opponents who criticized the agricultural colleges and those who advocated the application of the public lands to the support of common schools. The bill was referred to the Committee on Education and Labor, and there remained. A similar bill (S. 1187) was introduced by Senator Morrill in the Second Session of the Forty-third Congress, on January 25, 1875, and was ordered to be printed and laid on the table, after which date nothing more was heard of the measure. Exactly one year later, on January 25, in the First Session of the Forty-fourth Congress, Senator Morrill obtained leave to introduce a bill (S. 334) "to establish an educational fund and apply a portion of the proceeds of the public lands to public education, and to provide for the more complete endowment and support of national colleges for the advancement of science and industrial education." It was not until April 26 that the consideration of the bill came up before the Senate in Committee of the Whole. A long speech was made by Senator Morrill, which was a detailed elaboration of his introductory sentence, "I start with the proposition that all of our public lands, which are hereafter to be sold and are not called for as free homesteads, should be held exclusively for educational purposes—purposes that tower high above and dwarf all others." He spoke on the importance of education for national life and national character, on the work already accomplished by the national colleges, on the need of meeting the discontent of laboring men by education, on the value of the colleges for checking the decrease in the productive powers of farms, on the importance of technical education to train skilled labor in view of the decline of apprenticeship and to encourage American inventiveness. Such colleges, in developing an educated industrial and business class, would exercise a beneficial influence on the older colleges. Another important contribution to the country would be made by these colleges in

furnishing a supply of trained teachers for the common schools. The increase of men educated in institutions easily accessible would react favorably on political and social life, for "it is to be regarded as an axiom that when the masses are educated, there will be a nation of patriots, strongly devoted to the principles of civil liberty and observant of the laws of stable government. Such men build up and do not tear down. One thoroughly educated man exerts an influence over an entire neighborhood, sometimes throughout the state and nation; but the influence of a well-directed college is much more extensive and much more permanent. The latter is a perennial fountain, always pouring forth a living stream of moral and intellectual missionaries." The remainder of the speech was devoted to substantiating the claim of these colleges to be national colleges. "These colleges are often called 'agricultural colleges,' perhaps because here for the first time agriculture obtained equal favor, or even any attention, or because several states have given that name to their institutions as an honorable distinction, or perhaps the term may be sometimes derisively applied, as though it were an absurdity to expect any growth of science and learning from an agricultural college; but while it is true that all sciences related to agriculture are to be included and must be and are taught in these national institutions, though not to so great an extent as it is to be hoped that they yet will be, there is nothing excluded touching any other industrial, mechanical, or even classical interests." Turning to the charge that the graduates of these colleges did not follow agricultural pursuits, he said, "They have the right to do that or anything else they choose; to be artists, mechanics, surveyors, merchants, teachers, lawyers, doctors, or ministers, but whatsoever they are, they will be better for being thoroughly and scientifically equipped, and they will also be able to tender more or less valuable aid to all branches of industry, despising none." If the charge were true, "so much the more need is there of creating and cultivating a taste in that direction." The only other speaker was Senator Maxey of Texas, who proposed a substitute bill providing for the distribution of the proceeds of the public lands to all states and territories for common school progress and agricultural colleges, to be divided according to population between the ages of five and twenty. Beyond these two speeches there was no further discussion of the bill, which seems to have been dropped thru lack of interest.

Four years later, in the Third Session of the Forty-sixth Congress, on December 9, the subject was again brought up, and bill S. 133, in terms identical with those referred to above, was introduced by Senator Burnside of Rhode Island. On December 15, charge of the bill was practically taken over by Senator Morrill after Senator Burnside had explained that "the bill contemplated the distribution of these funds (that is, the proceeds of sales of the public lands and the surplus revenue of the Patent Office) according to the number of residents of the States of ten years old and upwards who cannot read and write; that is, two-thirds of the amount to be so distributed, and one-third for the more complete endowment and support of colleges." Senator Morrill, in outlining the nature of the bill, referred to the history of the



land grant colleges, and again gave his interpretation of the purpose of the act of 1862. "The object of the law was not to injure any existing classical institutions, but to reinforce them and bring liberal culture within the reach of a much larger and unprovided for number of the industrial classes in every State. It was designed to largely benefit those at the bottom of the ladder who want to climb up, or those who have some ambition to rise in the world, but are without the means to seek far from home a higher standard of culture. This and more was sought to be accomplished by bringing forward, at less cost of time and money, courses of study of greater use in practical affairs than those, then largely prevailing, which seemed to offer little of lasting value beyond the mere discipline imposed." Referring to the other provision of the bill he argued that "it seems obvious that both colleges and common schools require the earnest attention and the most precious resources of all the States, as well as of the General Government. Without undertaking the entire control of the general subject Congress may yet legitimately make a contribution so emphatic that no State will falter in generous coöperation." When the debate was reopened on the following day, the greater part of the time was devoted to the common schools, the needs of which it was claimed were greater. On December 17, the whole tenor of the bill was changed by the acceptance of an amendment by Senator Teller of Colorado to distribute the proceeds provided for annually instead of only their interest. An amendment by Senator Ingalls of Kansas to exclude the colleges from the benefit of the measure was rejected in spite of his plea that "there is too much tendency in this country toward half-education, and these poor little half-starved colleges that are scattered through the country have filled the cities of this land with more failures than any other cause you can name." The bill, when it came to the vote, was passed, 41 to 6. It was brought to the attention of the House on January 20, 1881, when the motion of Mr. Goode of Virginia for unanimous consent to consider it was refused. On February 21, Mr. Goode again attempted unsuccessfully to bring a substitute bill (H. R. 334) before the House. The fate of the bill was therefore settled by the refusal of the House to take any action on it. Senator Morrill, however, does not seem to have been deterred, for in the First Session of the Forty-seventh Congress he introduced S. 23 on December 5, 1881, and S. 936 on January 24, 1882, both containing the same provisions as the previous bills for the establishment of an educational fund and the more complete endowment of national colleges. Nothing more was heard of these two bills, and it was not until May 1, 1888, in the First Session of the Fiftieth Congress, that Senator Morrill renewed his efforts (S. 2840), adding this time "receipts from certain land grant railroad companies" to the proceeds from public lands to be distributed. The Senate apparently was still not ready to make the desired increase in the funds of the land grant colleges.

Two years later, however, Senator Morrill met with greater success when he again approached the Senate in the Third Session of the Fifty-first Congress with a proposal similar to those which had previously failed. On the advice of the Committee on

Education and Labor, to which the bill (S. 3256) was referred, Senator Morrill substituted another bill (S. 3714), merely dropping out the reference to public education, a change which saved the bill from the fate of the Blair Education Bill for the support of common schools. This, the second "Morrill Act," differed from the first in two essential particulars. The first act made a grant to the states of certain quantities of public land, which they could dispose of in whatever manner seemed advisable to their authorities; the second act granted to the states money in the treasury accruing from previous sales of the public lands by the United States government and receipts from certain land grant railway companies; the law of 1862 was a grant limited to the public lands described therein, the law of 1890 provided for an annual appropriation which in 1890 was to be \$15,000 for each state, and was to be increased by \$1000 a year until in 1900, and thereafter each state would receive annually \$25,000.

These two variations from the first grant made by Congress were in the original bill as it was introduced into the Senate by Senator Morrill on April 30, 1890. Thus framed, the bill was referred to the Committee on Education and Labor, and on May 17, Senator Blair of New Hampshire, the author of the Blair Education Bill for common schools, reported it favorably from the committee. The report was accompanied with recommendations for amendments which still further altered the scope of the bill from the previous law. It will be more convenient, however, to describe these amendments when they came before the Senate for adoption at the time the bill was under consideration.

This consideration Senator Morrill, on Thursday, June 12, announced that he would ask for the bill upon the following Monday, June 16. At that time he said that he would "very briefly make remarks in explanation thereof." He had "yet to hear of the first senator who is opposed to the bill." Senator Morrill, however, did not wait until Monday, June 16, to call up the bill as he had announced. On Saturday, June 14, he asked the Senate to proceed to its consideration, a motion which brought forth a protest from Senator Gorman of Maryland. Senator Morrill replied, "I hope the Senator from Maryland will not object, for I think his state is as anxious as any state in the Union to have the bill passed. I do not think it will take much time. I want to submit some remarks which will occupy, perhaps, only fifteen or twenty minutes." Senator Gorman then said that he would of course withdraw his objection if the Senator from Vermont desired to speak. "I was not aware of the Senator's desire to address the Senate upon the bill." The presiding officer thereupon announced that the bill was before the Senate, and Senator Morrill proceeded to open the discussion.

The appropriation proposed in the bill, Senator Morrill said, "is to be made from the funds—and only a small part of such funds will be required—arising from any sales of the public lands or from the receipts on the large debts due from the land grant railroads." The funds to be appropriated would thus be derived wholly from the public lands, as these were "the fertile source from whence the land grant railroads



obtained their present large capital, to which the original stockholders have not been supposed to have made any visible contribution.

"For many years our public lands have not been held or considered as a fixed source of revenue, but have often been devoted to noble national purposes, to large gifts to new states for schools and universities, to colleges for the benefit of agriculture and the mechanic arts, to free homesteads for the landless, to the union by railroads of the Atlantic and Pacific boundaries of the Republic, and to agricultural experiment stations, and the constitutional power of Congress to dispose of the public lands, or of their proceeds, for the common benefit of all the states has seldom been challenged and never successfully disputed. . . . No matter what party may be in power, in any adjustment of revenue measures, these undetermined rivulets, whether continuing to flow or not to flow, will not be relied upon, as they have never been relied upon, for the ordinary support of the government, and the national objects here embraced would seem to be worthy of even the best and last dollar in the treasury. If the government was about to make its last will and testament it could hardly find more worthy and deserving legatees."

Senator Morrill then referred to the fact that in 1880 he had introduced a bill, appropriating the proceeds of the sale of the public lands to both the agricultural colleges established under the law of 1862, and also to the common schools in the states, and that the bill had passed the Senate by a majority of 41 to 6. It had failed in the other House, however, and while he had re-introduced it in almost every succeeding Congress, it had not yet been adopted. In the present Congress the Committee on Education and Labor had given the precedence to the comprehensive bill for the support of the common school systems brought forward by the Senator from New Hampshire, Senator Blair, and while that bill did not include the agricultural colleges, Senator Morrill said that he did not complain. If, however, he continued, the bill of 1880 had become a law, the sum of \$57,538,369 would have been appropriated under its provisions as an educational fund in the ten years which had since elapsed.

Senator Morrill then went into a calculation which showed that on January 1, 1890, the total indebtedness of the Pacific railroads to the United States government was \$113,775,504, and altho it could hardly be expected that this entire amount would be paid at the moment of its maturity, there could be no doubt that it would ultimately be paid if "sacredly devoted in part to the high object here proposed, . . . and when the last acre of our munificent public domain shall finally have been disposed of there will be something to show for it, besides railroads, of priceless value to the people of every state.

"The elementary education derived from the common schools . . . is a marvellous addition to the self-supporting and self-instructing power of each individual. . . . The citizens of a free government founded upon universal suffrage . . . have need of a broader general culture. Primary schools are vastly important, but not enough. The problems which concern human rights and political liberty, the encouragement



of all the virtues and the prevention of crime should be studied in the light of all history, of all philosophy . . . and above all else, the intellectual and moral character of a free people should be elevated and established, not only by common schools, but by the highest institutions of sound learning. I wish we could multiply them ten-fold and especially multiply such as grapple with practical affairs of every-day life. . . . No American will long dwell where there are no village schools, nor be quite contented in a state that does not liberally support collegiate education." And then the senator gave a quotation from Wordsworth.

The senator, who, it will be remembered, was chairman of the Finance Committee of the Senate, then reminded the Senate that "our government presents the solitary example among great nations of having too much revenue," but intimated that this "present excess will only mark an epoch in our financial history, soon to disappear and not soon to return," for it will "devolve upon Congress" to provide an "adjustment of our revenue to our annual expenditures." In such an adjustment, it seemed to the senator, evidently referring to the receipts from the public lands, that "uncertain receipts from miscellaneous and fluctuating sources interfere with all regular estimates of revenue, and the permanent disposal of whatever amount may hereafter be received from some of these irregular sources would prove a wholesome measure, provided the objects promoted or to which they may be assigned are found to be wholesome and of sufficient national importance. A surplus cannot always be applied advantageously to the reduction of the unmatured public debt, and idle funds in the Treasury . . . beget danger of heedless and possibly wild projects for massive expenditures. . . . It is believed that the proposition here presented for the land grant colleges will meet with the universal approval of the American people and is free from all serious objection. . . . The most valuable direct favor the government has ever bestowed upon agriculture and the mechanic arts was unquestionably the endowment of the so-called agricultural colleges.

"The land grant colleges are institutions that do not lift the cost of their instruction out of the reach of the many, nor generate habits of profuse expenditure, and are healthy homes for students, especially for those destitute of hereditary resources, who look only to a life of honorable effort and labor. The most advanced studies were not, it will be remembered, to be excluded from these colleges, and whenever provided with sufficient resources they should be ready to offer all the learning demanded by any portion of the American people, and yet they must not fall short in the branches related to agriculture and the mechanic arts, but must lead in the highest instruction asked for by the industrial classes. . . . Military tactics also were included among the subjects to be taught in the land grant colleges, and . . . the thousands of trained young men who annually graduate from these colleges, should our country ever need their services, will not forget how 'to set a squadron in the field,' and will be found, as a reserve force, of immense value—a value hardly less than that confidently relied upon from our renowned national institution at West Point."

Senator Morrill then quoted a publication<sup>1</sup> of the Bureau of Education to the effect that "next to the Ordinance of 1787 the congressional grant of 1862 is the most important educational enactment in America." He pointed out that "the students of these colleges are frequently sought after and given remunerative employment before they have completed their course of study. I know of one five-year-old graduate who now receives a salary as a professor larger than that of the president of the college where he graduated. . . . Forty-eight of these institutions are now annually sending forth a large number of vigorous young men . . . and they are all loudly asking further favors for their respective state institutions. The funds derived from the national grant of 1862, generously supplemented by the gifts from the several states, have borne healthy and excellent fruit, but it is everywhere manifest that funds larger in amount could be used with more advantage and with much greater results, and it is certain that larger funds are also truly required to fully and efficiently equip these colleges in nearly every state. Something more than a blackboard and a piece of chalk is wanted. A laboratory, with an extensive stock of chemicals, scientific instruments and apparatus, libraries, museums, mineralogical cabinets, military halls and gymnasiums cannot be had without expense, but they are also prime necessities. Sharp competition is met with in securing and retaining professors of advanced scientific requirements from the eager demand of older institutions which have been richly endowed by their friends and by their alumni during many generations. . . . The branches of scientific learning have been greatly multiplied and expanded in modern days, and there is a public and progressive demand for them which these colleges must supply at whatever cost." The senator then, after a quotation from Washington's *Farewell Address*, closed his speech, saying, "Finally, let me urge that the land grant colleges are American institutions, established by Congress, and if a small pittance is needed to perfect and complete their organization or to equip them for educational work that is designed to elevate the condition of the great part of the American people, I shall confidently hope that it will be granted without reluctance and with full faith in the national benefit that cannot fail to accrue."

The Senate, after a few questions, agreed, without debate, to three amendments proposed by the Committee on Education and Labor. The first amendment provided that the Secretary of the Interior should certify at the end of each fiscal year the net proceeds arising from the sale of the public lands, and that the Secretary of the Treasury should likewise certify all the moneys paid into the treasury by any railroad companies, their successors or assigns, named in the act of May 7, 1878, or any credits allowed to said railroads by the United States, and that "the appropriations herein directed to be made to the several states and territories for the benefit of colleges" should be made from the funds so accruing "on account of the public lands and railroads aforesaid, so long as such receipts and credits shall be sufficient there-

<sup>1</sup> United States Bureau of Education, Circulars of Information, 1888, *The History of Federal State Aid to Higher Education*.



for." The second amendment was a mere verbal one. The third amendment inserted a clause whereby the funds should be paid out of the treasury only "upon the order of the trustees of the college."

A fourth amendment of the committee was then read by the secretary. The amendment provided that the grant authorized in the act should become operative only upon the assent of the state legislature, and added to the requirement that the college treasurer should report each year to the Secretary of Agriculture and the Secretary of the Interior an account of the disbursements of the money received, the words, "showing specifically its application to instruction in agriculture and the mechanic arts and the facilities for such instruction." Senator Morrill moved to amend the amendment of the committee by adding also the words, "including the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and in a thorough training in the English language."

Senator Reagan of Texas then arose. Mr. Reagan had had a varied political career, having served in high office under three governments. He had begun his public life as member of the House of Representatives of the independent Republic of Texas, had resigned his seat in the House of Representatives of the United States at the outbreak of the Civil War to become Postmaster-General in the Cabinet of the President of the Confederate States, and was Acting Secretary of the Treasury to the government at Richmond when the advance of Grant's army compelled him to flee with Jefferson Davis until they were both captured by Federal troopers. Ten years after this Mr. Reagan's political disabilities under the War Amendments to the Constitution had been removed by special act of Congress, and thereupon he again took his seat in the House of Representatives of the United States, where he framed the bill establishing the present Interstate Commerce Commission. Mr. Reagan had recently, at the age of seventy, been elected by the legislature in which, when it was an independent congress, he had sat nearly half a century before, to represent Texas in the United States Senate, and he now arose to oppose Senator Morrill's amendment on constitutional grounds.

Senator Reagan said, "Mr. President, I am in hopes that the amendment of the Senator from Vermont will not be adopted. There can be but one main purpose in it, and that is to give the federal government supervision of education in the states. If the desire is to aid the agricultural colleges of the states I have no objection to the appropriation proposed, but if the object is to make a pretext for taking the control and supervision of that education away from the states, then I think it is very seriously objectionable. . . . Surely that cannot be necessary, and surely it does not recognize the fact that the systems of education in the different states belong to the states." With the appropriation itself, with the general provisions specifying how it should be spent and requiring reports to show that it was thus spent, the Senator from Texas said that he was content; "but when we go beyond that and take up



these three several provisions which contemplate the idea that it is to put these colleges in their detailed regulations, and as to the subject-matter to be taught, and what is to be done in them, under the regulations of the federal government, I trust we are not prepared to go that far." Senator Morrill replied that he was "a little surprised" that the Senator from Texas should object to "the additional amendment proposed. . . . Under the bill without that amendment it would be a little doubtful whether one of these colleges might have the power to employ a professor in veterinary science, or whether they could teach even the English language, or whether they could teach ordinary mathematics. . . . It is one which a large number of the presidents of the colleges seem to regard as indispensable. . . . It has been suggested by them, and as I understand has been approved by Farmers' Alliances and by all sorts of bodies."

Senator Hoar of Massachusetts wished to know from Senator Morrill and Senator Blair if the bill did not need amendment in respect to its reference only to "colleges." The Senator from Massachusetts said that there was "a good deal of doubt" in his mind "what meaning might be given to the term 'college,'" and he mentioned the Miller Institute in Virginia as an illustration of an institution "which does not have the name of college but which is intended expressly for instruction in the mechanic arts." Also Senator Hoar wished to know whether the bill did not restrict the legislatures in distributing the grant to institutions which received the benefit of the original provision, or which might hereafter be incorporated. It seemed to him that an institution now existing, which had not shared in the first grant, would be excluded from this second one.

Senator Blair answered Senator Hoar and pointed out that the bill provided for grants to colleges established under the act of 1862. He said that it was not the understanding of the committee that it was "recommending an annual appropriation for an indefinite number of colleges which might hereafter come to be established." In nearly all the states there is only one "agricultural college, and that one college would take the entire annual appropriation allotted to the state, unless the state should see fit to establish from the original land grant fund another college, in which case the annual appropriation could be divided by the legislatures between them. But institutions, to be able to receive a part of this annual grant, "must be institutions which derive their vitality from the original act of Congress making appropriations of the public lands."

Senator Morrill arose as soon as Senator Blair was seated, and referring to Senator Gorman's announcement at the beginning of the debate that he withheld his objection to the consideration of the bill only in order to permit Senator Morrill to speak, said, "If objection is made I move to proceed to the consideration of the bill notwithstanding the objection." Senator Gorman asked for a postponement on the grounds, first, that it was already evident from the debate that the bill and the amendments needed more careful consideration, and secondly, there was a unani-

mous understanding in the Senate for some time that Saturdays were to be devoted to unobjected cases on the Calendar. The presiding officer (Senator Cullom) informed Senator Gorman that the Chair understood that there was a unanimous agreement of the Senate, but the permanent occupant of the chair had ruled that a senator had a right to make a motion to take up a bill, notwithstanding that the agreement was a unanimous one.

Senator Cockrell of Missouri hoped that the Senator from Vermont would not insist upon taking up the bill now, as it would mean that the entire day would be spent in debate without anything else being accomplished; but Senator George of Mississippi immediately followed, saying, "I hope that the bill will be taken up and acted on and passed. I regard it as one of the most meritorious bills ever introduced into this body. . . . These agricultural colleges, in my opinion, have done more good and are likely to do more good in the near future for the advancement of the great farming interests of this country and the great mass of people than all the rest of the colleges and universities put together. I hope the bill will be considered to-day."

To this Senator Gorman replied that "if this motion prevails, as a matter of course it breaks up the understanding that we have had and under which we have been acting for the past month. . . . It is perfectly well known that a great many senators look to other public business on Saturday, when they know that the rule has been that we would proceed only with unobjected cases on the Calendar. I think it is manifestly unfair to them to take up a bill of this kind. I do not refer to the merits of the bill, as the Senator from Mississippi has done. It is to observe the rules that I have made this suggestion." Continuing, Senator Gorman said, "I withdrew the objection, as we all do under such circumstances, and I was glad to hear from the Senator from Vermont, who presented this matter very ably, as he always does. Otherwise I should have interposed the objection and insisted upon it at the moment, but out of compliment to him, as being due to him as the father of the Senate, I withdrew the objection. . . . I trust the Senator from Vermont will not insist upon his motion and compel us to resort to the yeas and nays." Senator Morrill then suggested that if "senators will give unanimous consent, so that it [the bill] should be considered next Thursday, after the morning business, I will consent to have it go over." No senator interposing an objection, the bill was made the order of business for Thursday, June 19, after the morning business.

At the same time it was ordered, upon the request of Senator Blair, that the report upon the bill made by the Committee on Education and Labor be printed in the *Congressional Record*. The report therefore appears in the *Record* immediately following the foregoing debate and before the account of the proceedings to which the Senate next turned. It says that "the object of the bill is to place the system of colleges for the benefit of agriculture and the mechanic arts . . . upon a basis of assured support for all time." The institutions are now thoroughly established, the report



goes on to state, and have already demonstrated that they must be accepted as among the chief agencies thru which the new and practical education of the people is to be accomplished. "Although in the popular mind they are intimately associated with the advancement of the fundamental pursuit of agriculture, yet they are equally devoted to the diffusion of scientific education as applied to the mechanic arts, and thus they embrace within their jurisdiction the whole field of the practical application of science to the wants and welfare of man. . . . Perhaps contrary to the general impression, the proper equipment of one of these colleges is far more expensive, being at least ten times greater than that of an ordinary classical institution. A college of agriculture and mechanic arts is not a cheap affair, and the sooner we awake to the idea that it will and ought to cost something to spread that knowledge of facts and principles which will change the drudgery of common toil to the dignity and delight of intellectual and ennobling occupations the better." And then this section of the report closes: "The passage of this measure, which is introduced by the distinguished father of this system of colleges, will place them upon a sure foundation so long as we are a nation and link his name with theirs in one common immortality. So far as respect and recognition of great public services may properly influence us we would urge the enactment of this bill into law, satisfied as we are that the continued usefulness and development of the colleges is dependent upon permanent national aid in their support." Then follow some data concerning agricultural educational institutions in France and Germany, a statement that representatives of the Patrons of Husbandry and of the National Farmers' Alliance had appeared before the committee in favor of the bill, and letters from the committee of the Association of Agricultural Colleges and Experiment Stations and of the presidents of several colleges of agriculture and the mechanic arts urging that their colleges imperatively needed this grant in order to provide proper equipment for their scientific work and to keep pace with the increase of students.

When the morning business had been disposed of on Thursday, June 19, the Vice-President laid the agricultural college bill before the Senate according to the unanimous agreement of the previous Saturday; but Senator Gale of Maine insisting upon the continued consideration of the legislative, executive, and judicial appropriation bill, the agricultural college bill went over. On Saturday, June 21, Senator Morrill moved to proceed to the consideration of his bill. Senator Morgan of Alabama objected. "What has become," he asked, "of the general consent rule as to Saturdays if motions are to be pressed in this way to take up this or that bill?" Senator Morrill in his reply said that he was very anxious to have action upon the bill, "for the reason that I am desirous of leaving the city for four or five days on account of my health." This did not seem to make any impression upon Senator Morgan, probably because he was getting to be an aged man himself, and he announced after some discussion, "I do not think the Senator from Vermont ought to come in on Saturday morning and break up a rule that the Senate has been acting upon and relying upon for weeks



to get rid of this enormous Calendar we have here of unobjected cases. . . . The rule is violated, and so far as I am concerned, I intend to take what remedy I can to avoid the consequences, and I shall demand a vote on every bill that comes before the Senate hereafter on Saturdays." Senator Butler of South Carolina agreed with Senator Morgan, saying: "I must submit to him [the Senator from Vermont] that it is not fair when other senators have bills on the Calendar of unobjected cases which they would like to have considered, to precipitate a debate that is going to occupy the entire day. I shall call for the yeas and nays on the motion to take up the bill."

This situation was too unpleasant not to call for urgent efforts at remedy. Senator Ingalls of Kansas, the formal leader of the majority party in the Senate, obtaining recognition from the Vice-President, spoke as follows: "Under ordinary circumstances I should be inclined to oppose the motion, but the Senator from Vermont has stated that it is imperatively necessary that at an early day he shall leave the city for reasons and considerations personal to himself. I am sure that the Senator from Vermont would make no appeal personally to any member of this body to which the response would not be instantaneous and affirmative. It seems to me under the circumstances attending this matter, in view of our relations to the Senator from Vermont, his relations to the body, his great and often expressed interest in this subject, that he is entitled to ask us to waive our personal considerations and grant him this favor which he asks. Reluctant as I should be under ordinary circumstances to depart from the rule of the body setting aside Saturday for the consideration of the Calendar, in this instance I shall do so with pleasure, and sincerely hope that the desire of the Senator from Vermont will be acceded to by the Senate." Senator Ingalls was followed by Senator Voorhees of Indiana, the leader of the minority party in the Senate: "Knowing how he [the Senator from Vermont] is situated and surrounded, while I regret extremely that this bill comes forward on Saturday, I wish to say that I have not the heart to object to his having this privilege." Thereupon, after a question on another subject had been settled, the Senate, without a vote, took up the agricultural college bill for consideration.

The bill being before the Senate, the Vice-President announced that the first question was upon the amendment proposed by the Senator from Vermont to the amendment reported from the Committee on Education and Labor. This was the motion made by Senator Morrill on June 12 and opposed by Senator Reagan. Without discussion it was now added to the committee's amendment. The motion then recurred upon the amendment of the committee as thus amended. Senator Morgan opposed it. He could not understand why Senator Morrill desired to depart in this bill from the entire principle of the act of 1862. "It seems to me, Mr. President," he said, "that the Senator from Vermont is lending himself to a scheme here for the purpose of introducing into the act of 1862 certain new features which imply that the Congress of the United States shall take the control of education in the states where colleges are situated, and that the schools shall be regulated by a law passed here and by admin-

istrative measures enacted here. . . . If one thing has ever occurred in the history of the legislation of the United States to prove that the states are the proper guardians of public education, the history of the act of 1862 establishing the agricultural colleges is the best proof that could be adduced." Senator Morgan then proceeded to tell the Senate something about the Agricultural and Mechanical College of Alabama, and said, "I see no occasion now, Mr. President, for undertaking to prescribe to that college what the Congress of the United States ought not to undertake to prescribe to any college. The fact is that the curriculum of that college and its management are better in every particular than if it was controlled by a board of five or ten senators of this body. . . . There are no five or ten senators of this body to-day who are able to go into the faculty of that college and manage it as well as President Brown and the able men who appoint him. . . . I can see no necessity why we should undertake to interfere with the course of study there unless it is merely to get a precedent here of the actual control of the agricultural colleges . . . just for the purpose of having this matter of the education of the children of the United States declared to be within the jurisdiction of Congress."

Senator Reagan briefly repeated some of the arguments he had used on the occasion of the former debate. "If the bill had been framed upon the theory and terms of the law of 1862 I should have supported it very cheerfully. . . . It seems to me the purpose of the bill is to fix upon our legislation the principle that Congress is to go into the states, take charge of educational institutions, and regulate what is to be done with them. . . . It seems to me that the Senator from Vermont might have contented himself by letting this appropriation be made under the terms of the original law making appropriations for the benefit of agricultural colleges, but it appears that that does not satisfy him; that he must go further, extend the powers of the Federal Government, . . . and give supervision over this branch of schools to the officers of the Federal Government under rules which they may adopt." Senator Reagan thought that this must have been done so that by passing the measure, one of the arguments against the Blair Education Bill for supporting the common school systems of the states might be shut off. To these speeches Senator Morrill replied, "I cannot see that the objection of the Senator from Texas or the Senator from Alabama ought to have any weight here. Of course, if we make this appropriation, the government ought to be assured that it is to be applied and spent in the manner expected and provided." Senator Morgan then asked Senator Morrill what advantage there was in the proposed amendment over the provisions in the act of 1862. Senator Morrill answered, "I will say that some of the institutions are represented as not giving sufficient attention to the agricultural and mechanical parts of their studies; that they do not give them the lead; and this provision has been inserted in order to insure that they shall be so devoted."

The opposition made by the two southern Democratic senators, one of whom had been a brigadier-general and the other a cabinet officer of the Confederacy, was now reinforced by that of a northern Republican senator, who had served as a major-gen-



eral in the United States Army, Senator Hawley of Connecticut. "I am very sorry that the Senator from Vermont did not think best to confine this bill to the precise terms of the grant of 1862. . . . That act gave specific grants . . . to the States, to be dedicated to a well-defined purpose, and affixed only the simple conditions practically of faithfully reporting every year the progress made in science, and the condition of such institutions." When the states accepted the conditions "the whole business was closed, excepting the annual report. There was no inspection except by the reports. There was no saying 'If this fund be not wisely and honestly expended we will stop it,' as there is said here. . . . This bill, with its various specifications, provides 'that if in the expenditures they trespass beyond the line of instruction in the mechanic arts, then the government will cease to pay them.' . . . Now it is going to be a little difficult for a college to keep up the line of distinction between the expenditures. If one of the boys who are studying agriculture and at the same time, if you please, studying with a view to becoming a civil engineer, should think it best to take a little something of a liberal course of English literature and in the classics, you will have to keep a separate account for that boy. You will have to tell us what share and how, whether he got his education from the old fund or from the new fund." Here Senator Hoar interjected, "Or whether it was from the other funds of the institution." General Hawley acquiesced, "There may be other funds. Now that would make three separate accounts to be kept;" and while he was most anxious for this addition to the resources of the Connecticut school, he was very much opposed to "any plan of administration which is coming down there to inspect us, and say, 'You taught this boy in Latin while you were teaching him engineering and therefore we are going to dock part of your allowance next year.' For Connecticut—and I cannot speak for that school, for it is so hungry to take it—I would rather say we do not want your money unless you will just trust this State of Connecticut which has honestly administered since 1862 its old grant, and purposing to take more funds under that same dedication it will accept the trust and close the bargain and make its annual report, but do not come around exercising a guardianship over us as if we were wards in chancery and could not be trusted with these schools."

Senator Plumb of Kansas, another Republican senator, followed General Hawley. The Senator from Vermont, he said, had honorable identification with the original measure, a measure of very great importance, and he did not wonder that at this later period, a generation after the passage of the first act, he should seek to supplement that act by appropriations. But the appropriations, if made at all, ought to be direct appropriations. It would have been much better if the original grant had been a direct appropriation instead of the plan adopted. "The endowment consisted of land. . . . It was unequal, in the first place, in its allowance of land, and very unequal in the results by which those lands were commuted into money. Some of them were disposed of properly, and others were disposed of improperly. Some of them were disposed of wisely, and some unwisely. Some of the colleges got a large endowment, and others

got a very small endowment. . . . And worse than all, perhaps, Mr. President, the issue of the scrip representing the amounts of land to which the colleges were entitled resulted in a very vicious disposition of large areas of the public land in many cases. Immense fortunes were built up by dealing in that scrip," and Senator Plumb went on to tell that from one of the institutions in the northern states the certificates for the location of land were bought for a dollar and a quarter an acre and actually located on land worth \$25 to \$100 an acre. Senator Paddock of Nebraska interrupted to say that "a good deal of that scrip was sold at sixty cents an acre," and the Senator from Kansas accepted the amendment.

"Now," continued Senator Plumb, "we have these agricultural colleges." He did not know of "any educational institution anywhere in the East or in the West, in this country or abroad, that does not need, for the purpose which it feels to be important to its maintenance and spread of its personal influence, more money. Therefore I have no doubt that these colleges would make use of this extra sum of money if we should give it to them," but "if we are to give anything . . . it must come out of the treasury in one way or another. We cannot make this appropriation out of the proceeds of the public lands and of the sums that we may get from different railroads, and deceive anybody into the belief that it does not cost the people of the United States anything." The senator expressed his objection to this round-about method of appropriation, and then said, "But I object . . . on much more important ground. . . . The first section is practically a dedication of all the moneys we shall receive from public land sales to the purposes of scholastic agricultural education. Whatever that fund may be, upon the equities of the case as it will be construed by the colleges, the colleges will be entitled to it." This would introduce a new element into the management of the public land system. The United States, said Senator Plumb, "ought to have a definite policy in regard to the public lands." This great area of land ought to be held in trust for the people of the United States, "for the occupancy of men who make upon them their homes, and for no other purpose." Congress should never succumb to the temptation to make any other use of them, "nor put any person, or any corporation, or any institution, in the attitude of becoming a solicitor at the doors of Congress to have that done in regard to the public land system which otherwise would not be done." This was not all. "We have here a provision that all the funds which are received from railroads shall be likewise a part of this educational fund upon the books of the treasury and in the vaults of the treasury." He showed that these funds amounted in round numbers to \$100,000,000. "We have presented to us already through the medium of the Pacific Railroad Committee a proposition for a settlement with those companies, about which I shall not say anything now except . . . that when we come to consider what we shall do with railroads we ought to be under no constraint that will not permit us to deal with them from the highest standpoint of the public policy which is involved. We ought not to have colleges in different portions of the United States here, at any stage of the proceedings by which we settle the



obligations of those railroads to the government, saying, 'settle this way,' or 'settle that way' in order that we may have a swift realization of the promise you have made that we shall have this fund for the benefit of the colleges.

"But, Mr. President, there are hundreds of embarrassments that will arise in the administration of this first section. Suppose for instance, that the payment for any one year from the public lands and from the railroads both combined does not equal the \$25,000 a year" for each one of the states. "Does any one doubt that the colleges will come here and say, 'We have got our appetites prepared for this entire sum. We have our professors employed. We have these instrumentalities of education engaged; and you must give us this money out of the Treasury'? Does any one doubt that we would do it? Then, why not do it in the first instance? But suppose more than \$25,000 per annum for each institution is realized, as will probably be the case. . . . We have become the trustees by an act of Congress of this fund for the benefit of the agricultural colleges of the United States. The entire fund, first and last, will probably be \$200,000,000. They will come here and insist that as we have dedicated this fund to them, the limitation of the preceding Congress ought to be removed, and they will have great claim upon us on that score. They will say that this limitation was not conclusive; that 'if you had intended to limit it to only \$25,000 per annum, why did you provide for these vast sums aggregating \$200,000,000?' . . . Who does not realize that that limitation is a mere temporary expedient, practically the sugar-coating of the bill, . . . and we shall have endowed them more munificently than any institutions of the kind were ever endowed in the history of the world. I do not mean to say that is not right, but I want the senator who says we ought to give \$200,000,000 to these agricultural colleges to put it into black and white in order that the people may understand it, and that Congress may know what it is to pay and make the appropriation direct out of the Treasury." Senator Plumb said the surplus in the treasury would be so soon exhausted that within two years whoever proposed to make an appropriation which would perceptibly be felt would be asked at the same time to show how he would raise the money to pay for it, and Senator Cockrell of Missouri interjected, "In less time than that." Senator Plumb declared that he would vote for a bill appropriating \$1,300,000 a year to these colleges, but he would not vote for a bill which under pretense of voting \$1,300,000 "opens the door inevitably and necessarily to the donation out of the Treasury of the United States of as vast a sum as that of which I have just spoken."

Senator Morrill arose as soon as Senator Plumb had finished, and expressed his regret that the Senator from Kansas "is not of the same hearty opinion in favor of this bill as his predecessors were in 1862, both of whom here exerted a very strong influence in favor of the passage of the act of that year." In this statement the venerable senator made a slip of memory, for one of the senators who voted against the First Morrill Act was Senator Lane of Kansas. Senator Morrill said that the senator's fear that the bill was a dedication of all the public lands and of all the Pacific Railroad

debts to the agricultural colleges, "was without the slightest foundation." He said that all the bill proposed was to pay these appropriations out of the receipts from those two sources. "The amount," concluded the senator, "is very pitiable." Senator Plumb then asked Senator Morrill why not appropriate the money directly out of the treasury, instead of instituting this complicated kind of bookkeeping. Because, answered Senator Morrill, "it has always been regarded that the Congress of the United States has a right to dispose of the public lands for any purpose that it may see fit, provided the object shall be one of national import and equally applicable to all the states;" and then followed a colloquy between Senator Plumb and Senator Morrill, in which the New England senator maintained that the debts from the Pacific Railroads were of the same nature, on account of the land grants made to them, while the Senator from Kansas declared that the debts had no more present relation to the public lands "than if the roads were built upon the water."

Senator Allison of Iowa here wanted to know what became of the sinking fund provided for in the Pacific Railroad Bill of 1878, was it swallowed up in this bill too? Several senators asked questions in regard to different phrases in various sections, and finally Senator Blair of New Hampshire took the floor to give a complete exposition of the history and purpose of the bill. He explained that the idea of the bill originated in a measure which the Senator from Vermont had introduced into the Senate some ten or twelve years previously, which proposed that all the moneys derived from the sales of the public lands and from the repayment by railroads of their debts to the government should constitute a separate fund in the treasury, the interest from which should be used, one part for the support of the agricultural colleges, and the other part for the support of the common schools. The amount which this interest would come to was by many thought not to be of any consequence considering "the existing condition of illiteracy in the country," and so a bill was brought in making a specific appropriation for the benefit of the common schools. This bill was then upon the table of the Senate on a motion to reconsider.

When it became apparent, Senator Blair continued, that this bill for an appropriation to the common schools would have difficulty in passing the present Senate, the Senator from Vermont introduced his original bill of March 25, which was like his bill of ten years before apportioning the proceeds of the public land sales and the Pacific Railroad debts between the agricultural colleges and the common schools, only that in this latter bill, instead of merely the interest from these amounts being thus given, a direct appropriation of the moneys accruing from these two sources was divided between the agricultural colleges and the common schools. It was hoped that this would be accepted as a compromise by those who on the one hand thought that the grant only of the interest of these moneys was too small an appropriation, and those on the other hand who could not bring themselves to support a large grant in aid of the common school system out of the ordinary revenues of the federal government. This bill was referred to the Committee on Education and Labor, and members of the commit-



tee informed the Senator from Vermont that the committee felt disinclined to report any measure making appropriations for the common schools, on account of the opposition which such appropriations encountered upon the floor of the Senate. The committee, however, was very willing to do something for the agricultural colleges, and the representatives of the agricultural colleges, having made "such investigation as to the condition of sentiment in Congress as satisfied them that they would do better not to burden themselves in the effort to secure an appropriation for their colleges or entangle themselves, I should say, with the other idea with reference to the common schools of the country," the suggestion was made to the Senator from Vermont that he consider the advisability of making an appropriation for the agricultural colleges alone. Thereupon the senator introduced, on April 30, a second bill, drawn with reference only to the agricultural colleges, and entirely excluding the idea of "any interference with or connection with the common schools of the country." This was the bill then before the Senate.

Senator Blair then proceeded to consider the bill in detail, and in reply to something which had been said by Senator Allison, he explained a seeming contradiction between the first and second sections. The first section appropriated the money for the agricultural colleges out of the public land and Pacific Railroad funds, but as, at the same time, those funds must be exhausted, the second section goes further and contemplates a direct appropriation out of any money in the treasury, when there will no longer be these special funds to draw upon. In further answer to Senator Allison, Senator Blair said that there was no intention upon the part of the framers of the bill "to dedicate anything to the agricultural colleges beyond the annual amount stated in the bill." Senator Allison interjected, "Then the first section ought to be stricken out . . . because it will be so construed by other people;" but Senator Morrill replied, "I do not think it will."

Senator Blair continued his speech at considerable length, discussing his own education bill, and the relation which he considered the federal and the state governments should bear to each other on the subject of education. Senator Blair's bill had recently met with a repulse in the Senate, and this had evidently upset the senator's good humor, for when Senator Dawes of Massachusetts endeavored to ask a perfectly harmless question, Senator Blair refused to listen and spoke with an arrogance which occasioned a sharp colloquy between the New England senators, and considerably deflected the course of Senator Blair's remarks. Finally, the senator returned to the pending bill and concluded his remarks by saying that "the people of the country, the common people of the country, 'we, the people,' are turning to these industrial institutions for the education of the rising generation with a vastly increased sense of the importance of industrial education as compared with education in any other form. These institutions are really the nuclei where this form of education must take root, and from which it must expand throughout all portions of the country," and he hoped that the Senate, if consistent with its sense of legislative duty, would permit the

Senator from Vermont, whose interest in these colleges had "been almost lifelong, existing for a generation," to see the colleges placed by this bill upon a permanent basis, which of itself would almost be sufficient to ensure the perpetuity of the American institutions.

Senator Hawley then again addressed the Senate in remarks of some length, analyzing the phrasing of the bill from clause to clause. He complained that there were altogether "too many details and specifications and examinations and reports and intermeddlements in this bill as it stands," and he proposed to cut out most of the references to the public lands and all of the provisions concerning control over these appropriations by the Secretary of the Interior or the Commissioner of Education. These provisions the senator characterized as "the same vicious machinery" which pervaded the bill, and noticed indignantly that "a subordinate officer of the government is to stop the payment and summon the state to come here and answer to him or anybody else, I do not care who, as to whether it has wasted the appropriation." In regard to the public lands, the Senator from Connecticut was willing to retain the clause "paid out of the proceeds of the public lands," not because he considered such a particularization of the source of money necessary or even admirable, but because "it does meet the scruples of many men," who desire to be friends of the bill, and support and enlarge agricultural colleges, but cannot quite bring themselves to "give the ordinary proceeds of taxation." They, however, "hold that the public lands were in some mysterious way a different property from any other property of the United States," and therefore he would leave this expression in the bill "because it will make votes." A discussion took place on Senator Hawley's proposal to abbreviate the bill.

Senator Evarts of New York, former Secretary of State, followed General Hawley with a few words in general commendation of the bill, saying that "the usefulness of these institutions in our state has been so conspicuous, I might say brilliant, that no one, I think, but must wish that an increased power should be given to them." Senator Dolph of Oregon also spoke briefly in favor of the bill, but objected emphatically to the first section, saying that in his judgment it made "a special dedication of all these proceeds [of the public lands] and the amounts received from the railroads for all future time," as a fund for the agricultural colleges.

Senator Morrill very much regretted that the bill had taken so much of the time of the Senate; he had no idea it would. He hoped that the debate would be concluded and the bill passed that day. He did not want it referred back to a committee or delayed, "because if it passes at all through both Houses, it is necessary that it should be passed by the Senate promptly." He was willing to consent to some of the suggestions offered in debate, altho not to "all of the suggestions of the Senator from Connecticut [Mr. Hawley], who seems to have come in here for the purpose of making a new bill." Accordingly, upon the motion of Senator Morrill, the clause was stricken out of the bill which required the treasurer of the respective colleges to report each year to the Secretary of Agriculture and the Secretary of the Interior, showing how all the



disbursements of the college had a specific application to agriculture and the mechanic arts. The Senate also, at the suggestion of Senator Morrill, rejected the amendment of the committee which would have required a state to replace any money which had been applied "to any other purpose or object other than for instruction in agriculture and the mechanic arts and facilities for such instruction." This was the amendment which had been offered by the committee at the request of the Farmers' Alliance and the Patrons of Husbandry. The Senate also struck out of the bill the provision whereby the Secretary of the Interior and the Commissioner of Education were authorized, under the approval of the President, to make rules and regulations to carry into effect the purposes of this law. A number of other changes were made in the bill, some purely verbal, and some to carry out more fully the amendments adopted above, and finally, upon the motion of Senator Hawley, the entire first section, relating to the proceeds of the sales of public lands and of the payment of the debts due to the government by the Pacific Railroads, was dropped from the bill. What was left in regard to this was simply that there should be "annually appropriated, out of any money in the treasury not otherwise appropriated, *arising from the sales of public lands*, to be paid, etc."

These amendments having been made, a long debate ensued over the provision in regard to separate colleges for the white and negro races, a debate which lasted until the Senate adjourned at six o'clock. In the act of 1862, which antedated the Proclamation of Emancipation, there was no reference to the negro race, a state being required simply to establish "at least one college where the leading object shall be . . . to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe." The present bill, however, provided that no money should be paid to any state for the support of a college where a distinction of race or color was made in the admission of students, but that the maintenance of colleges separately for white and colored students should be deemed a compliance with the act. Senator Pugh of Alabama opened the discussion of this question by offering an amendment that an institution, whether styled a college or not, and whether it had received any money under the act of 1862 or not, if supported by the state out of its own revenue for the education of colored students in agriculture and the mechanic arts should be eligible to receive part of the appropriation made by this bill as a compliance with the provision for separate colleges for white and colored students. Senator Pugh explained that this amendment was necessary in order to cover the case of the Tuskegee Institute in his state of Alabama, and similar institutions in the other southern states which were aided by the legislatures for the education of negroes in agriculture and the mechanic arts, but were not called "colleges," and therefore did not come under the terms of this bill.

The debate that ensued upon the presentation of this amendment covered a wide range. Senator Morrill said that the amendment was "eminently proper," but Senator Hale of Maine thought that it gave too much power to the legislatures; they might distribute the funds to schools "which might be very transitory in their character. It

does not need to be applied to a regular college, but to any school." Senator Hawley also objected because the amendment would allow the fund to "be given to as many schools as the legislature chooses, half a dozen of them," and it did not seem to confine the distribution sufficiently to agricultural and mechanical schools. On the other hand, Senator Hoar considered the amendment to be too narrow, because it applied only to institutions now being aided by the legislatures, and suggested to Senator Pugh that it be extended to cover schools which might be aided in the future by the legislatures.

Senator Hoar then addressed the Senate at some length on the inadvisability of confining the appropriation made in this bill to colleges established under the act of 1862, or, if the amendment of the Senator from Alabama was adopted, to those colleges and colored schools at present aided by the legislatures out of state funds. Senator Hoar illustrated the unwisdom of this by referring to Massachusetts. The fund derived from the act of 1862 was divided in Massachusetts, said Senator Hoar, "between the agricultural college at Amherst" and the "Boston Technological School, which is an institution which mainly is devoted to the education of chemists, of civil engineers, of professors, and of scientific men who take a large place in the world. . . . But," continued the senator, "the particular interest of Massachusetts is the mechanical and manufacturing arts. Ninety or ninety-five per cent of its people are supported directly or indirectly in that way. Neither of these institutions is devoted, exclusively or even chiefly, prominently to the great interests of our people." There was an institution in the state, however, the Senator from Massachusetts said, "which is devoted exclusively to the education of young men for the mechanic arts," and which has been a "marvelous success." "But the legislature of Massachusetts cannot, under the old act, or under this new bill, give any portion of this fund to the institution which in reality is the important one in our state in reference to the callings of the people of the state." The senator was speaking of the Worcester Polytechnic Institute.

Senator Hale then arose again to voice his objection to the Pugh amendment. "It was not intended in the fundamental act, and I think it is not the intention of the movers and projectors of this bill, that this benefaction of the general government shall be scattered pervasive to schools generally." Yet under this amendment the fund could be dissipated among many institutions. Not merely should this be prevented, but the bill as it stood should be altered, "so that this benefaction should flow in the direction which was intended by the original act." Senator Hawley also came forward and said that he should be very much discouraged about this measure if the money could be divided among many institutions, and this "would not be in accordance with the original statesmanlike purpose of the act." Thereupon Senator Hoar called attention to the mistake of the Senator from Connecticut in assuming that the object of the original act was to have but one institution; "the original act left the Legislature to divide it among twenty," and in point of fact in his own state and in many others, the legislature did divide it among at least two institutions. Senator Morgan then



said that he thought the states could be trusted in this matter. "All we want to do here is to see that this money is applied to instruction in agriculture and in the mechanic arts. If the States have incorporated institutions which do not fill the designation or denomination of colleges according to the letter of the statute, it makes no difference." Senator Hale returned to the debate and said that it might be true that this gift had been divided in some cases, but that he considered such a division a misfortune. "I think, in any State, if you begin to divide this appropriation, you will soon destroy it. If there were half a dozen institutions in Alabama, or Louisiana, or Maine, or Massachusetts, and each of them comes to the Legislature and asks for an equal component part of this gift of the Federal Government, the whole general aim of it will be destroyed." The bill had better be so framed that the money could be divided as little as possible, and "then it will do something . . . it will help to build up one school, possibly two. But when you go further than that it will be frittered away." The senator hoped that such modifications would be introduced as to limit the number and scope of the institutions that would apply to the legislature for their share.

Senator Morgan arose. "In the State of Maine it might be necessary, perhaps, to keep them from frittering away and distributing it out among a dozen schools or more; but the people of Alabama have a more intelligent idea of the way to handle the money for education than that," and Senator Morgan thought that they could be trusted. Senator Hale did not think that it was a question between one locality and another. "The Senator from Alabama himself is a constant example before us of intelligence and of assumption that is superior to anybody else," but "the Senator with his superior intelligence is not going to be on the scene of action forever in Alabama; I wish he could be; all of us wish that; but a time will come and its teeth will eat away the things of the present." The Senate was legislating for the future and he had a right to legislate for Alabama as much as the Senator from Alabama had, and he proposed to affirm again that it would be an evil if this bill was left so that the people of Alabama could scatter this grant among five or fifteen or twenty-five institutions.

Senator Randall Lee Gibson of Louisiana, formerly a distinguished major-general in the Confederate Army, here came forward and repeated a suggestion he had already made, that the clause be modified so as to read "and maintenance of colleges, universities, and institutes for agriculture and mechanical education," calling attention to the necessity of the third word of definition on account of the institutions, like the Massachusetts Institute of Technology, which were not chartered under the name of "college." Senator Blair read a letter from the Chairman of the Association of American Agricultural Colleges and Experiment Stations stating that "it expresses the hope that you will strenuously oppose the amendment of Senator Hoar," to enlarge the list of institutions that could benefit by this bill. The Association felt that this amendment would "change the entire character of the bill . . . and place before the legislature of every state a sum of money to be contested for by numberless schools,

and to be ultimately dissipated, in too many cases, by division and 'log-rolling.'" Senator Hoar denied that he had withdrawn his amendment on account of the representation of these gentlemen. He had withdrawn it because the Senator from Vermont thought that the amendment would embarrass the bill. Undoubtedly the agricultural college gentlemen did not want a fund divided "when if it is not divided they will get the whole of it for their institutions." It is natural and to be expected, but it is not for the public interest." How idle it would be for Massachusetts, with ninety-five per cent of her population supported chiefly by mechanical and manufacturing employments, to have her entire share of this fund appropriated to an agricultural institution. "It would not have been just to have taken this whole fund and within the limits of the states have given it to one college, when the colleges there divide this matter of education."

The Senate then went off into a discussion as to how the grant would be divided between the two races in the southern states. Senator Gibson suggested that it be divided in proportion to the number of students in the respective institutions, but Senator Ingalls objected. Senator Hale then proposed that the fund be divided according to the respective population of the two races in the state, and Senator George objected. The latter senator pointed out the injustice of such a provision in such states as Mississippi, South Carolina, and Louisiana, in which the colored population outnumbers the white population, and traced the history of education in Mississippi since the Civil War. The \$200,000 which that state had received under the original act of 1862 was spent by the government without regard to the purpose for which it was received, so that when, in 1876, it proceeded to establish an agricultural college, there was not a dollar of this fund left. The people of Mississippi, mindful of their obligations, replaced the fund by taxation, appropriating one-half of it to the white agricultural college and one-half to the colored agricultural college, altho there was nothing in the law which compelled them to so divide it. He did not think, after this generous and voluntary action in the past, that now, contrary to the intention of the venerable author of the bill, a provision should be engrafted into it which would compel Mississippi to give three dollars to the colored agricultural school for every two dollars which it gave to the white school. He considered this a matter of "deep and vital importance," not so much on account of the unequal distribution of this fund itself, but because it would probably induce the state "to withdraw from the appropriations which we have hitherto made to the colored agricultural college a sum sufficient to equalize it," and this he did not desire to have done. Senator Hale wanted to know how this could be effected. If the colored people were to the white people in Mississippi as three is to two, instead of the white people threatening, on account of such a provision as he proposed, to withdraw the appropriation from the colored college, why was there not danger that the colored people would withdraw all aid from the white school. This provoked a sharp rejoinder from Senator George on the impossibility of getting thru the discussion of this bill "without a waving of the ensan-



guined garment," and about that time the Senate bethought itself of adjourning. Senator Blair suggested, apropos of distributing the fund according to the number of students in attendance, that it cost nearly as much money to maintain a school for one hundred students as for one hundred and fifty, and that therefore an equal provision ought to satisfy everybody. The Senate, at six o'clock, adjourned without having voted on the amendment of Senator Pugh which started this long discussion.

On the following legislative day, Monday, June 23, after the conclusion of morning business, Senator Morrill again moved that the Senate proceed to the consideration of the bill, and the motion being agreed to, he proposed an amendment in lieu of that offered by Senator Hale. This amendment authorized the legislature of any state in which there was a separate educational institution supported by the state out of its own revenue, for the education of colored students in agriculture and the mechanic arts, "however named or styled or whether or not it had received money hitherto" under the act of 1862, to "prepare and report to the Secretary of the Interior a just and equitable division of the fund to be received under this act" between the college for white students and said college for colored students. Senator Morrill thought that this amendment would be acceptable to "members on both sides of the Chamber." In this he was correct. Both Senator Hale and Senator Pugh withdrew their amendments, and the substitute proposed by Senator Morrill was adopted. A number of other verbal changes were accepted, and upon the suggestion of Senator Chandler the words "or may be hereafter established" were added to the clause in regard to separate colored institutions. This was to cover the case of Delaware, where a separate colored college was not yet in existence. Senator Ingalls pointed out that it was both a needless complication and also bad administrative ethics to charge the Commissioner of Education with the duty of certifying to the Secretary of the Treasury what states were entitled to their annual share in the appropriation. Senator Hawley, in supporting Senator Ingalls, agreed that the reports of the colleges were to go to the Secretary of the Interior, and furthermore, only the cabinet officer himself should be charged with this important duty, however he might delegate it to the Commissioner of Education. Senator Plumb strongly supported this view, and the Secretary of the Interior was substituted as to these reports for the Commissioner. This having been done, a number of other changes were made throughout the bill, by which various duties as to countersigning and the like were given to the Secretary instead of the Commissioner.

The bill, now being clear of all the amendments offered, was ready for final vote, but Senator Blair arose again and said, "I will simply say that I think, and it is an observation to which no one can object, that this whole movement, about which we are so critical and hypercritical and over-hypercritical to take care of the colored people in the distribution of this money, came into the Senate upon the motion of the Senator from Alabama [Mr. Pugh] and that no northern man thought of it." None of the southern senators moved at this, but Senator Ingalls arose and remarked that as far

as any imputation upon the northern member of the Senate rested, he was willing to assume his share. He confessed that a proposition to distribute this money among separate schools for the white and colored races could not proceed from any northern senator. His own instincts and convictions were against such a division. But when the Senator from Alabama offered his proposition to adapt this measure to a condition that exists in the South, "while I could not propose such a plan I cordially give my consent to it." Senator Hawley thanked the Senator from Kansas, and said that he thought the same way. "I would have one institution in each state with all the money I could get for it, open to everybody that the Lord may see fit to allow to come into the school." That was his opinion, but he yielded in this particular because it seemed to be the best on the whole to do it.

No other senator took any notice of Senator Blair's remarks, and the title of the bill having been amended to conform to the changed condition resulting from the striking out of the provision in regard to the public lands and the debt due from the Pacific Railroads, the Vice-President stated the question to be the passage of the bill, and the bill was passed without a division.

In the House of Representatives, on June 24, the bill was referred to the Committee on Education, and was soon reported favorably. Then, on August 19, occurred one of those incidents by which the Fifty-first Congress established a precedent in American legislative history. From 1789 until 1890 the House of Representatives had been governed by rules which established in general terms the order in which business should be considered. The general appropriation bills had always been given a certain right of way, but when they were not up for consideration the time of the House was allotted according to a complicated method marked out in the standing rules between certain calendars of bills or among the committees in rotation. This arrangement had been a comparatively simple one in the early days of the government, when even in short sessions it was practicable to despatch almost all the business that pressed for attention. But with the enormous expansion of the Union as the nineteenth century progressed and the no less enormous expansion of the field of government activity in a civilization of steadily increasing social complexity, the business of the House of Representatives became hopelessly congested. If Congress had sat thru the year, it could not have given attention to a tittle of the measures which poured in upon it. The result was that a bill depended for consideration as much upon skilful parliamentary manoeuvring as upon inherent merit, and amid the clash of motions resulting from the desire of members to get up their favorite measures, an almost limitless field was afforded for tactics of partisan obstruction. With the assembling of the Fifty-first Congress in 1890, the political complexion of the House changed, and a new Speaker, Mr. Reed of Maine, was elected to the chair. The historic rules were considerably altered, and among other changes it was provided that the Committee on Rules, a body of five members headed by the Speaker, should have the privilege of bringing up a report in the House at any time. The practice thereupon began of this committee reporting



a motion that on a certain day at a certain hour a certain bill would be taken up, and after debate of such and such a length of time shall be voted upon at a specified hour. Sometimes these orders are very elaborate, making similar arrangements for long lists of bills, or dividing an elaborate bill into automatic compartments for debate and vote. Since the Fifty-first Congress a large part of the business of the House, even the consideration of the general appropriation bills, has been transacted in this manner.

In accordance with this practice, on August 19, 1890, Mr. Cannon of Illinois, later Speaker of the House, reported an order from the Committee on Rules, setting apart six specified days in August, beginning with August 19 itself, for the consideration of a large number of measures supposed to concern the agricultural interests of the country. The first bill on this list was the agricultural college grant bill, upon which, after two hours of debate, the previous question was to be considered as ordered. The House was at this time still unused to this method of procedure, and it was only after much debate that the rule was adopted, Mr. McKinley of Ohio, later to become President of the United States, making an official appeal to his party in its behalf, and Mr. Hatch of Missouri, the chairman of the Committee on Agriculture in the former Democratic Congresses, warning his party that "the Democrat representing an agricultural district in the House of Representatives who throws an obstacle in the way of the consideration of these bills will rue it before the snow flies in November," a statement which the *Record* says was greeted with "applause on the Republican side."

The order having been adopted, the agricultural college grant bill came up immediately for consideration. The bill was in the control of Mr. McComas of Maryland, a man of prominence in the Republican party, who subsequently served a term in the Senate, and died in 1907 as Justice of the Court of Appeals of the District of Columbia. Mr. McComas explained the details of the bill to the House, answering questions put by many members, among whom were Mr. W. C. P. Breckenridge of Kentucky and Mr. Lanham of Texas, afterward Governor of that state, who referred to President Buchanan's veto of the Morrill bill in 1858-59. Mr. Kerr of Iowa, one of the questioners, could not see the justice in bringing taxes on five million people in New York and on one hundred and fifty thousand in Delaware, and giving to each state the same amount of \$25,000. The six New England States, with twenty-four representatives in the lower House, would receive \$150,000 a year, while New York, with thirty-four representatives, would get only \$25,000. This was not the method of any other proposition for the distribution of public money for educational purposes. Two Republicans, Mr. Dunnell of Minnesota and Mr. O'Donnell of Michigan, the latter the chairman of the Committee on Education, opposed it. Mr. Dunnell said that he had "never yet been converted to the theory that the Federal Treasury should take care of education in the several states." He believed that it was "better for each state to rely upon its own resources, to develop its own intelligence, to build up its own state institutions." He could not see, for instance, why Massachusetts should take \$25,000

from the United States Treasury—"She is loaded with wealth"—and he pointed out also that in fifteen of the states "we have not a distinctive agricultural college as the outcome of the act of 1862." Mr. O'Donnell said that as far as he knew "this bill has not been asked for by the farmers." If the bill is for the benefit of agriculture, "why not confine its provisions to the purely agricultural colleges instead of bestowing a portion of these large sums upon institutions that have established an agricultural chair to comply with the forms of law." A provision to confine the benefits of the appropriation to purely agricultural and cognate subjects had been stricken out in the Senate; if it should be reinserted by the House, he would support the bill.

An amendment to this effect, confining the appropriation "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries in life, and to the facilities for such instruction," was offered by Mr. Joseph D. Taylor of Ohio. Mr. Taylor said that the bill, as it passed the Senate, permitted the agricultural colleges to use the money as they would. They could teach Latin or Greek or Hebrew. "The objection has been made that our agricultural colleges educate young men to be lawyers and doctors and preachers and teachers, and disqualify them for the farm," and the amendment was intended to cure this and prevent these colleges from educating in such a way as to prevent their boys from ever being farmers. "The trouble is that in some of the states there is very little difference between an agricultural college and a literary college."

The opposition to the bill was led by Mr. Caruth of Kentucky, representing the Louisville District. He said that any man who could find any difference in principle between this bill and the Blair Education Bill for the wholesale subventing of the common school systems was "so endowed with intellectual acumen as would enable him to divide a hair into two parts and to determine its west from its northwest side." The gentleman from Kansas, Mr. Anderson, was always talking here about a railroad lobby, but Mr. Caruth wanted to tell him "that the only lobby I have seen at this session of Congress was the educational lobby composed of the presidents of the agricultural institutions. They have haunted the corridors of this Capitol; they have stood sentinel at the door of the Committee on Education; they have even interrupted the solemn deliberation of that body by imprudent and impudent communications." Mr. Caruth then read a telegram which he said the chairman of the committee had received from this source, protesting because the committee had not seen fit to report the bill in the absence of one of its most distinguished members. "And from that hour to this they have haunted the halls of this Capitol with their presence. They have buzzed in your ears, sir, and in yours, and in the ears of every member of this House. It has been an organized, strong, combined lobby, for the benefit of the agricultural colleges of the country." Mr. Caruth asked what was the purpose? "Do they throw wide open their portals for any boy to enter who may desire? No, there is a golden knocker at the door," because the institutions were paid insti-



tutions; if not paid in tuition, then in board. A reference to the practice of a school in Alabama raised a protest from many members as to institutions near their homes, including a protest from General Joseph Wheeler of Alabama and others. Finally, Mr. Lewis of Mississippi asked if the gentleman from Kentucky would allow him to state that "in the agricultural college of the State of Mississippi there are students who earn their own expenses by manual labor." And Mr. Caruth replied, "Will the gentleman allow me to state to him that at Yale College, at Harvard College, at Cornell University . . . there are students who earn theirs."

Mr. Turner of New York, after referring to the cost of attending an agricultural college, charged the supporters of the bill with playing politics. "The real animus, the real purpose of this legislation is simply this: The agricultural classes are in a state of unrest, and the great agricultural communities that have given Republican majorities year after year are asking themselves to what end they have given these majorities. Now . . . if you give the American farmer the same chance that you give the manufacturing class, if you will remove from him the burden of unjust tariff taxation that has weighed heavily upon him for a quarter of a century, he will be able to educate his own sons in his own way without governmental aid." Mr. Anderson of Kansas said that he had served for five years as president of the Kansas Agricultural College, and defended the agricultural college presidents from Mr. Caruth's charge of lobbying. It was true, Mr. Anderson continued, that "during the first half of the period since the agricultural grant was made in 1862, the colleges organized under it were entirely and naturally devoted to the professional curriculum, and necessarily turned out lawyers, doctors, preachers, and teachers. During the latter half of the period the agricultural colleges, finding that they were not giving a satisfactory education to the farmers devised a curriculum for the purpose of affording specific technical knowledge," and "the object of this bill is to cause these colleges which have been absorbed by professional educators (*sic*) and which have turned out professional men only to adopt and apply a modern curriculum applicable to the mechanic arts and agriculture alone."

The time limited by the order of the House for debate upon the bill having now expired, the amendment of Mr. Joseph D. Taylor was adopted, and then, after voting down 95 to 53 a motion to recommit with instructions to strike from the bill all references to the authority given to the Secretary of the Interior and the Secretary of the Treasury, the House, by the decisive vote of 135 to 39, passed the bill.

On the following day, August 20, when the bill with the House amendment was again laid before the Senate, Senator Blair moved that the Senate concur in the amendment. The motion was agreed to without debate or dissent, and the Houses being thus in accord, the bill was forwarded to the President, Mr. Harrison. On August 30, 1890, he affixed to it his signature and it became a law.

## INCREASED ANNUAL GRANT AUTHORIZED BY THE ACT OF 1907

THE grant authorized by the act of 1890 went into effect immediately, \$15,000 a year being appropriated to each state. An automatic increase of \$1000 a year took place for each state, until by 1900 the sum of \$25,000 had been reached. The annual appropriation remained at that figure until 1907, except that in 1905 \$15,000 a year was added to the original annual appropriation of \$15,000 authorized for each agricultural experiment station by the act of 1887. The additional grant of 1907 was enacted in this wise. The bill making the annual appropriation for the Department of Agriculture for the Second Session of the Fifty-ninth Congress being before the Senate on February 21, Senator Nelson of Minnesota brought up the amendment of which he had given notice on January 16. This amendment raised the grant, to be paid out of any money in the treasury, not otherwise, to each state for the agricultural colleges to \$35,000 a year, with an increase of \$5000 each successive year until \$50,000 should be reached. The debate on this amendment covers less than one column of the *Congressional Record*, and therefore could have been of but very few minutes' duration. Senator Nelson said: "What induces me to present the amendment is that in a great many of the states, especially in the south, they are now establishing country and rural agricultural schools, and the object of the amendment is to enlarge the scope of our agricultural colleges so that they can fit teachers for these local agricultural schools." Senator Bacon did not think the increase was large enough, but Senator Nelson said that it was impossible to make it larger at present with any hope of success.

The Agricultural Appropriation Bill was in charge of Senator Proctor of Vermont, who resigned the Secretaryship of War in President Harrison's Cabinet to become Senator Morrill's colleague in the Senate. Senator Proctor accepted Senator Nelson's amendment with the statement, which it is difficult to reconcile with the existence of the act of 1890: "I wish to say that there has been no addition to the appropriation for the agricultural colleges since the original act established them, under the bill introduced by Senator Morrill, and I happen to know that it was the Senator's intention the last year of his life to prepare an amendment substantially like that of the Senator from Minnesota." The amendment then being accepted by the chairman of the Committee on Agriculture, it was added to the bill by the Senate.

When the Agricultural Bill was received back by the House on February 26, 1907, the House, as is usual in the case of the great appropriation bills, disagreed with all of the amendments, and sent the bill to conference. On March 1, the Senate conferees reported to that chamber that the conference had been able to come to an agreement upon eighty-eight of the ninety amendments added to the bill by the Senate. Upon two of the amendments, however, the conference could reach no agreement, the senatorial members insisting upon the amendments, and the representatives from the House



refusing to accept them. One of these two amendments was the additional grant to the state agricultural colleges. The Senate, without debate, resolved to adhere to the amendments and requested a further conference with the House. The Vice-President reappointed the same conferees, namely, Senator Proctor, Senator Hansborough of North Dakota, and Senator Simmons of North Carolina.

The same conference report was not presented to the House, owing probably to the pressure of business in the last days of a short session, until the following day, March 2. When Mr. Wadsworth of New York, chairman of the Committee on Agriculture, presented it with the request that the House adhere to its refusal to accept the two Senate amendments and request a further conference thereon, Mr. Clayton of Alabama moved that the amendment making the additional grant to the agricultural colleges be accepted by the House, despite the conferees. He said that it was in line with previous legislation.

Mr. Wadsworth then took the floor and explained that the House conferees had refused to accept this Senate amendment because it was a most important piece of legislation, including an ultimate expenditure of \$1,150,000 a year, and "it had never been considered by the House Committee nor by this House, and had never been considered by the Senate five minutes." Mr. Wadsworth said that there was no state in the Union so poor that it was not able to give to the cause of agriculture anything that that cause might justly ask of it. "The original appropriation in 1862 was made when there were a great many new territories and new states. They were not rich; they had not developed their taxable property, and perhaps in those days it was a sensible proposition." The most serious objection to this proposed legislation, in Mr. Wadsworth's opinion, was that "it opens the widest door towards centralization of power in the Federal Government. It is the longest step towards centralization that this House has ever taken," and then he said: "Let me show you how easy the steps are. Last year we passed the Adams Bill, so called, giving \$15,000 a year for the experimental stations. I said then that I was opposed to it and that I thought every state ought to take care of its own and that the next thing in the program would be \$15,000 to \$25,000 for agricultural colleges. And the step, as you see, has come. Now let me show you the bills that are pending on this line now before the Committee on Agriculture: 'To apply a portion of the proceeds of the public lands to the state normal schools.' Now there are twice as many state normal schools as there are agricultural colleges, and twice as many votes behind them to pass that measure in this House. Another is 'for the maintenance of agricultural colleges in congressional districts;' another 'to provide'—listen!—'to provide an annual appropriation for industrial education in agricultural high schools and in city high schools;' another 'to provide an annual appropriation for branch agricultural and branch experimental stations, and regulate the expenditure thereof.'"

The next step, concluded Mr. Wadsworth, "would be the public schools," and with it federal governmental supervision over all education. He begged the House to let

such a measure go over and be considered on its merits, and not "jam it through here on an appropriation bill."

Mr. Clayton replied to Mr. Wadsworth that the proposal had received ample consideration except possibly by the members from the city districts, and "Mr. Speaker, we know what we want to do and when we want to do it, and we propose to pass this measure now in order that poor boys may have the full benefit of a good education in scientific agriculture and the most useful and common mechanical arts." He indicated the argument of the chairman of the House conferees drawn from the large amount of proposed legislation of a similar character, and concluded: "We do not hesitate to give money to Annapolis or West Point. We do not hesitate to give money for our consular service. . . . Let us in this small way encourage agriculture, as we have commerce, her handmaiden." The danger from centralization is imaginary. "Nobody is afraid that the Government is going to be ruined and centralized on account of this small contribution to the agricultural and mechanical colleges of the country."

Mr. Tawney of Minnesota, the chairman of the Committee on Appropriations, obtained the floor from Mr. Wadsworth, and out of the amplitude of his knowledge pleaded with the House not to follow the Senate in all of these reckless increases of appropriations, exclaiming, "Is there no limit, Mr. Speaker, to the extravagance of this Congress?"

Mr. Davis, a colleague of Mr. Tawney, followed him and argued in favor of the amendment. He said it was not centralization, that the states pay 83 per cent of the expense of maintaining this system of agricultural education, and that the land grant colleges have influenced the non-agricultural industries nearly as much as they have improved agriculture. "The engineering courses in these colleges have supplied a large share of the men to develop our vast system of transportation and manufacturing." By increasing the educational facilities in each state, each unit would become stronger. "This amendment means decentralization in every line and word."

Mr. Scott of Kansas followed with a vigorous denunciation of the amendment: "Here we have a measure brought in in the closing hours of this session almost as important as this original act . . . brought in here without any consideration by any committee in this House, without any consideration on the floor of the Senate, and in such a shape that if it had been brought in here originally it could have been stricken from the bill on a point of order." Mr. Scott considered it "preposterous that the states should come to Congress after having been so generously treated and demand still further grants," and he was glad that Kansas had not done so. In reply to Mr. Perkins of New York, Mr. Scott agreed that the larger proportion of the students from these colleges did not follow agricultural pursuits; "to a large extent they are mostly colleges for general education for those entering all ranks of life." Mr. Scott further contended that there was no commonwealth in the Union that could not amply supply the money now appropriated by this amendment, and he related



his own experience as a member of the Kansas legislature. He sat on the Committee on Appropriations, and when the appropriations for the various state educational institutions came to be considered, the committee took judicial notice of the fact that the agricultural college was receiving \$40,000 a year from the federal treasury,<sup>1</sup> and the committee appropriated just \$40,000 less than it would otherwise from the state treasury. If this amendment passed, the amount of money appropriated from the state treasury for the agricultural college would be reduced by just the amount this bill would carry. "What is true in Kansas will be true in all the other states and territories. The passage of this bill will not result in a single additional dollar being spent for agricultural education. It will simply mean that the money shall be taken from the national and not from the state treasuries."

Mr. Townsend of Michigan favored the amendment. He pointed out that the House had spent thousands of dollars for the purpose of investigating fuels, for the purpose of investigating geological conditions, and "let us say by our vote that manhood is not at a discount in comparison with coal or gold. Can this House afford to subsidize steamship companies, develop water courses, test coal, and then refuse to aid in extending knowledge and developing manhood?" Mr. Gardner of Michigan differed from his colleague. He did not think that Michigan wanted the money, and when Mr. Townsend said that the president of the Agricultural College of Michigan insisted that the grant should be made, Mr. Gardner retorted that of course every one of the colleges or any other institution would say the same.

Following two speeches by Mr. Hepburn of Iowa, the chairman of the Interstate Commerce Committee, and Mr. Keifer of Ohio, who had been a Speaker of the House, the former advocating the amendment as an equalization of the inequality of the grant of 1862, and the latter opposing it as being itself distinctly unequal, the House proceeded to vote. On a *viva voce* vote the speaker thought that the noes had it. Mr. Clayton thereupon demanded a division, and the division disclosed yeas, 100, and noes, 92. The roll call was then ordered, and upon this vote the record stood 120 in favor of accepting the amendment and 87 against it. The noes, however, were formidable in weight, if not in numbers, comprising besides other well-known members, such leaders of the House as Mr. Burton of Ohio, Mr. Dalzell of Pennsylvania, Mr. Hill of Connecticut, Mr. Loudenslager of New Jersey, Mr. Mann of Illinois, Mr. Overstreet of Indiana, and Mr. Payne of New York, the chairman of the Committee on Ways and Means. Mr. Wadsworth, Mr. Keifer, Mr. Perkins of New York, and Mr. Tawney, as indicated by their remarks, also voted "no."

The House having thus accepted the Senate amendment, the amendment was incorporated into the bill and this provision became a part of the law.

<sup>1</sup> This included the appropriation, as it then stood, for the agricultural experiment station.

## AGRICULTURAL EXPERIMENT STATION APPROPRIATIONS

THE value of experiment stations or model farms in the promotion of agricultural education was early recognized, and was emphasized in particular by the reports on European institutions. When the law establishing the Maryland Agricultural College was passed in 1856, provision was made for a model farm, on which experiments were made and recorded for a number of years. In 1870 Harvard College established an agricultural laboratory in accordance with the will of Benjamin Bussey, who left the income of \$300,000 and two hundred acres at Roxbury for "a course of instruction in practical agriculture, in useful and ornamental gardening, in botany, and in such other branches of natural science as may be tried to promote a knowledge of practical agriculture and the various arts subservient thereto." Experimental studies were conducted for several years and were checked only by a financial crisis. Valuable contributions were made in popularizing the idea and in training scientific experts to take charge of experimental stations by Samuel W. Johnson, professor of theoretical and agricultural chemistry, and William Brewer, professor of agriculture, of Sheffield Scientific School at Yale. State-aided experiment stations were established in Connecticut in 1875 under the direction of Professor Atwater, and in North Carolina at Chapel Hill in 1877 in connection with the state agricultural college. When the Hatch bill was before Congress the Committee on Agriculture was able to report more than twelve agricultural experiment stations, organized as such, throughout the country.

Federal action on the subject began in 1882 (Forty-seventh Congress, First Session), when Mr. Cyrus Clay Carpenter introduced a bill (H. R. 6110), "to establish national experiment stations in connection with the agricultural colleges of the various states." With reference to this bill a convention of delegates of agricultural colleges, meeting at Washington in 1883, discussed the question of national aid for experiment stations. This discussion was continued in 1885 when the convention, which met at the call of the Commissioner of Agriculture, adopted a resolution "that the condition and progress of American agriculture require national aid for investigation and experimentation in the several states and territories." In the interval between the two conventions (Forty-eighth Congress, First Session) Mr. Adoniram J. Holmes of Iowa had introduced a bill (H. R. 44) similar in aim to the Carpenter bill, for which the Committee on Agriculture on July 2, 1884, substituted another bill (H. R. 7498), "to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and acts supplementary thereto." Nothing came of these bills, but the ground was prepared for a successful issue by these attempts and the agitation of the conventions of agricultural colleges.

The bill to establish agricultural experiment stations in each state in connection with the agricultural and mechanical colleges created under the provisions of the law of 1862 (the so-called First Morrill Act) was introduced into the Senate (S. 372) of



the Forty-ninth Congress soon after its assembling, on December 10, 1885. The introducer was Senator James Z. George of Mississippi, one of the prominent figures in the reconstruction days in that state. The bill was referred to the Committee on Agriculture and Forestry, and on April 21, 1886, was reported back by Senator George with a favorable recommendation. On June 9, the bill came up in its regular order in the Senate, but in the absence of Senator George from the chamber it was passed over. This again occurred on June 18.

But on July 8, 1886, Senator George being present, when the bill was called in its regular order, it was taken up by the Senate for consideration. No debate took place upon the bill at this time. Senator Benjamin Harrison of Indiana, afterward President, suggested that several territories, notably the Territory of Dakota, had established agricultural colleges and ought to be included in the bill, which only contained in its context the word "States." Nobody objected to this, and throughout the bill, whenever the word "States" occurred, the word "Territories" was also added. Senator Orville H. Platt of Connecticut, afterward the author of the celebrated "Platt Amendment" for the government of Cuba, suggested that this was a very important bill and ought to go over until the next day for purposes of examination, and in this he was supported by his colleague, General Hawley, who said that Connecticut already had provision of its own for agricultural experimentation, and he would like to investigate how this bill would affect it. These suggestions seemed reasonable to the Senate, and the bill went over, notwithstanding some pettishness on the part of Senator Warner Miller of New York, who ardently desired the bill to be passed forthwith and talked about Senator Hawley "killing" it.

On the following day, July 9, when the bill again engaged the attention of the Senate, several important amendments were adopted. On Senator Harrison's motion, the inclusion of the territories in the benefits of the bill was more formally secured by the addition of a new section, with the proviso that the agricultural college in a territory, to which the proposed experiment station was to be attached, should not have less than fifty students.

General Hawley then started to address the Senate, and after emphasizing the importance of the Senate considering carefully a bill appropriating \$690,000 a year for all, started to explain the difference in principle between this bill and the First Morrill Bill of 1862. He had not gone far, however, when he was interrupted by the operation of the five-minute for debate rule under which the Senate was acting. It thereupon becoming obvious that the bill could not be considered under any such limitation of time as the five-minute rule, the President *pro tempore*, John Sherman, "as Senator from Ohio," objected to the consideration of the bill at all, and as the Senate was proceeding on a calendar of unanimous consent bills, this objection was fatal. A parliamentary wrangle ensued, because Senator Miller could not understand why the bill was not regular before the Senate, and then vigorously objected that "this bill is one in which a majority of the American people are interested, and I do

not think that any technical rule in this body should throw it out at this stage of the proceedings," but his objections were of no avail and the bill was dropped for this session.

Early in the following session, on December 20, 1886, Senator George again moved the consideration of his previous bill (S. 372), but on the plea of Senator Cameron of Pennsylvania that the bill would provoke considerable discussion, the bill went over to the following day as unfinished business. On the following day, however, on the motion of Senator Hale of Maine, consideration of the bill was further postponed until after the holidays. The bill came up definitely on January 17, 1887, and much time was devoted to the discussion of a proposal in the bill to place in the hands of the Commissioner of Agriculture the power to standardize fertilizers. The burden of the attack on this proposal arose out of opposition to the attempt to interfere with state rights and to do something thru a central department that could be better done by the states themselves. Senator Hawley led the attack and pointed out that the bill was introducing a different principle of administration from that of the original act of 1862, and Senator Morrill supported him with the hope "that we shall not fetter the bill so as to prevent its being useful to all of the states." The most complete statement of principle was contained in the speech of Senator Ingalls of Kansas, who declared himself opposed to any interposition of national authority, and the desire of the framer of the bill to secure uniformity of methods and results in the work of the stations thru the Commissioner of Agriculture. "It is the conflict of the contrariety of opinions in this country upon these subjects that results in the greatest good to the greatest number. It is the collision and contest between opposing ideas or views of contending localities that enable us to reach the highest results in the departments of activity and government. But here is the adoption of a principle as a legislative declaration that we will concede to the General Government the right to establish uniformity in all these methods, and uniformity of results; that we will surrender our independence, relinquish all that we have hitherto been able to accomplish in this direction by individual effort, and consent to a general national supervision of this great subject."

The debate now turned on two points, first, the establishment of standards and supervision by the Commissioner of Agriculture, with responsibility secured by bonds directed to the United States Secretary of the Treasury, and, second, the payment of the grants by the federal treasury direct to the colleges instead of to the states as under the act of 1862. Senator Vest of Missouri pointed out that fear of interference by the central government had been the basis of the opposition to the Blair bill, and that one of the fundamental distinctions between federal and state powers was "that the states have the exclusive control over education." Senator George, however, insisted that state rights were not being invaded, that the colleges were corporations and had a right under their charters to receive gifts, that they would merely be employed as agents of the government, and therefore it was not unjust to require a bond



from the trustees to spend the money faithfully and to account for it. Before the debate proceeded much further, the Senate adjourned, and in spite of several ineffective attempts to call up the bill, the debate was not taken up again until January 26. After referring to the points previously discussed and urging that control ought to be placed in the hands of the states as is the effect of the act creating the colleges, Senator Morgan of Alabama raised the question whether the experiment station was to be located near the agricultural college, or whether it might be held in any part of the state. His own view was that it would be better to locate it where it would prove most useful. Senator George assured him that "the object of having the experimental farm connected with the college is that the fund contributed may be under the control of the agricultural professors, who are supposed to be able to give it intelligent supervision. There is another object. It is of very great importance, in my opinion, that, as was intended, the labor on the experimental farms shall be done by the students at the colleges, and that the money shall be expended in part in aiding the pupils attending the college who do work on the farms." Senator Morgan, however, pressed his point that the station should be located where it could do most good, and answered Senator George's objection that there was only \$15,000 for one station in each state, by arguing that there was enough money in the treasury to increase the appropriations. "In the course of time we shall have these experimental stations in every part of the state that has any quantity of distinct soil from the rest of the state."

Senator Vest questioned whether the government had any right to give grants out of the tax money for the experiment stations. He based his opposition on a study of the results of the act of 1862. He quoted statistics furnished to him by the Commissioner of Education to the effect that a very small number of students enrolled in the land grant colleges were studying agriculture. His point was somewhat invalidated by the loud protests of senators from different parts of the country, that the statistics misrepresented the facts in their states. A letter was read on the following day from the Commissioner of Education in which he complained that "if the statements made in the table are wrong, it is not the fault of this office, but the fault of the catalogues and other publications of the schools concerned, because the table was compiled entirely therefrom, and I had no other means for ascertaining the facts." Senators Ingalls and Morrill drew the attention of the Senate to Section 4 of the Act of 1862, in which it is stated that the appropriations were not made exclusively for instruction in agriculture.

After several amendments had been passed, Senator Hawley moved for the consideration of his substitute bill, which had the virtue of being modeled on and following the principles of the act of 1862. "It defines the work to be done sufficiently, and gives the money to the States to be accepted by the States for that purpose just as it did originally, and does not attempt to bond State officers or to come in under a legislature and deal with its creatures or anything of that sort." In order to afford time to consider the substitute and to know the status of the original bill, which "has been

hammered almost to death," he asked for an adjournment. The substitute bill provided that the appropriation for the experiment stations should be made annually by Congress to each state and territory claiming the benefits, for the purpose of conducting research on the physiology of plants and animals and other subjects bearing directly on the agricultural industry of the United States. The conditions upon which the grant was to be made were previous assent by legislative acts of the states and territories, the publication and distribution of bulletins every three months, and transmission of annual reports of operations to the Secretary of the Treasury and Commissioner of Agriculture.

When, on the following day, January 27, Senator Hawley had pointed out the merits of his bill, Senator George objected to its adoption, and explained that it was deliberately intended not to make the appropriations to the states and territories, but to leave "these agricultural stations nominally national stations; that is they are made national agencies for the performance of national work, the theory of the whole bill being a mere extension of the agricultural colleges which have prevailed for several years, and as a branch of the Agricultural Department, an appropriation is made in pursuance of that idea." The bill met the views of presidents of colleges and had the endorsement of several farmers' congresses. By an amendment of Senator Edmunds Congress was given the power to amend, suspend, or repeal any or all of the provisions of the act. On being put to the vote, Senator Hawley's amendment was rejected, and the bill as introduced by Senator George and amended was passed.

Two days later, January 29, the bill (S. 372) was laid before the House of Representatives and referred to the Committee on Agriculture, which reported it back favorably on February 2. Here the bill was in the charge of Mr. William Henry Hatch of Kentucky. After the bill on the motion of Mr. Hatch had been read, Mr. John J. O'Neill of St. Louis pointed out that every bill with the cow brand on it was sure to be passed, but Congress never considered labor, a fact to which he wished to draw attention, altho he had no objection to the bill. Mr. Hatch asked that the bill be passed as amended by the Senate. "In view of the few remaining days of the session the Committee on Agriculture have instructed me to present the bill as it passed the Senate under a motion to suspend the rules that it may become a law and not take the chances of amending the bill further and sending it back to the Senate." On a vote the rules were suspended, 182 to 12, and the bill was passed. The bill received the approval of the President on March 2, 1887.

The history of appropriations for agricultural experiment stations followed the precedent set by the development of land grants for colleges. On December 4, 1905, in the First Session of the Fifty-ninth Congress, Mr. Henry Cullen Adams of Wisconsin, long devoted to dairying and fruit growing, and identified prominently with the passage of the Food and Drug Act of 1906, introduced H. R. 345 into the House of Representatives. This was a bill "to provide for an increased annual appropriation for agricultural experiment stations and regulating the expenditure thereof," a measure to



which he turned his attention in 1903. The bill, which was reported back favorably by the Committee on Agriculture on January 15, 1906, came up for consideration on February 15. Mr. Adams reported forty-eight stations in all throughout the country. The growth of the country and the increased demands upon these stations made an increase in the appropriations desirable. The bill "adds an appropriation of \$5000 in the first year to each station, amounting in all to \$240,000, and then adds \$2000 each year for five years until the total increase shall be \$15,000 annually to each station. So that at the end of five years the total appropriation to the station in each State and Territory of the United States will be \$30,000." In support of the bill Mr. Williams of Mississippi declared that "there is no part of the public machinery in the states or in the Federal Government doing more good than the agricultural experiment stations. Their reports are of the highest importance, the research work that they are doing has been more beneficial to the agriculture of the country than anything else I know of; and whatever benefits the basic industry of agriculture of course benefits everything else." Mr. Fitzgerald of New York seemed to sound a note of opposition when he asked whether the increase of \$15,000 was not made at once because of the condition of the treasury, or thru "fear that the immediate appropriation of the entire amount might perhaps make it impossible to pass the bill." Mr. Adams, avoiding a direct answer to this question, said "that no legislation appropriating money for a public purpose can be supported on more reasonable or patriotic grounds and in the interest of economy than this appropriation which means the investment of money in order that we may get more money out of it," and he cited the noteworthy contributions made by the stations—such as the Babcock tester.

The House, however, did not seem to share Mr. Adams's enthusiasm about the bill. Taking advantage of a ruling by the chairman, "that we are in committee of the whole house and the gentleman is not bound to confine himself to the subject matter of the bill," Mr. Payne continued a debate from the earlier part of the day on his own bill, "to provide for the consolidation and reorganization of customs collection districts and for other purposes." For some time the two bills were continued side by side, and Mr. Wadsworth's question, "in view of the intimate connection between these two bills, is it proper for this committee to consider them both at the same time?" only drew the remark from the chairman that "the bill is being debated under the rules of general debate." When, on the motion of Mr. Adams, general debate was finally closed, only a few minutes were given to the bill. An amendment was introduced in the first section to make quite clear how much the stations were to get ultimately; and it was explained that this bill was "simply a reënactment of the Hatch Act in every respect except the additional amount which is granted to experimental stations." The bill was then passed. As a matter of record it may be noted that altho the debate on the bill nominally fills twenty-three columns of the *Congressional Record*, only about five columns were actually devoted to the real subject in hand and the remainder to the discussion on ports and customs.

## AGRICULTURAL EXPERIMENT STATION APPROPRIATIONS 65

The bill was laid before the Senate on February 19, and referred to the Committee on Agriculture and Forestry. It was reported back favorably on March 6. Six days later, on March 12, Senator Proctor moved to take the bill from the calendar for consideration. It was read a third time and passed without debate. On March 16, 1906, it received the signature of the President.





## PART II

### CONSTITUTIONAL AND EDUCATIONAL PRECEDENTS



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CONTENTS

1. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
2. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
3. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
4. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
5. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
6. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
7. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
8. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
9. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM  
10. The Evolution of Man: A Review of the Evidence  
by J. H. J. VAN DER STAM

## FEDERAL AID FOR EDUCATION

WHEN in 1856 Mr. Morrill became interested in promoting colleges for the study of agriculture and mechanic arts thru federal aid grants, he found adequate precedent before him. While the Constitution did not confer direct powers on the federal government for the promotion or control of education, and while education was regarded as a matter of concern for each state, Congress was always generous in its aid. The early attempts to found a national university, tho they proved abortive, and the strong advocacy of such a plan by Washington, Jefferson, and Madison are well known. The active but indirect encouragement of education began in 1785, when, following the Congressional Land Survey, the sixteenth lot in every township was reserved for the maintenance of public schools. Two years later lot number 29 was set aside in every township for religion, and not more than two complete townships in each state were set aside for a university. In 1803 the principle was established in the case of Michigan that such lands were under state control and were vested in the legislature. This principle may have been consonant with the principles of the Constitution, which empowered Congress to "dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States," yet in the history of federal grants the practice of making grants in aid without supervising their expenditure was one which was too often to lead to gross mismanagement. But whatever may have been the subsequent history of the grants, the statement of Daniel Webster may be fully endorsed when he said, "I doubt whether one single law of any lawgiver, ancient or modern, has produced effects of more distinct, marked, and lasting character than the Ordinance of 1787" (*Works*, vol. iii, p. 263). It incorporated wholly the principle that "religion, morality, and knowledge are necessary to good government, and to the happiness of mankind."

In 1802 the federal government made a grant of saline lands to Ohio, and about 1820 the practice was established of granting two full townships of saline lands to each state on admission, a practice continued up to 1876. Altho the grant of saline lands was made for the purposes of internal improvements in general, the greater part of it was devoted to education. From the same date each state on admission was granted from three to five per cent of the net proceeds of the sale of all public lands lying within its borders. In the case of Indiana, which received three per cent of such proceeds, one-sixth of the fund was set aside for a college or university. This fund was used in most cases for educational purposes, and after the admission of Florida, in 1845, the fund was definitely restricted for this end.

The public lands had so far not played an important part in the support of educational and other improvements. In 1824, however, a resolution was submitted in the Senate appropriating the public lands as a permanent and perpetual fund for these two objects, and was followed two years later by a similar resolution to distribute the annual surplus of \$3,000,000 which was expected to accrue in view of



the approaching extinguishment of the national debt. There seems to have existed a rooted opposition to the accumulation of a surplus in the treasury of which those in power might avail themselves. It was about this period that there began the party and sectional struggles that centred round the public lands, the surplus, and the tariff, which will be dealt with in a subsequent section. In 1833 Clay secured the passage of a bill for the distribution of land revenues, a measure vetoed by President Jackson on the ground that "Congress possesses no constitutional power to appropriate any part of the money of the United States for objects of a local character within the states." It was intended that the share of each state should be employed for education, internal improvements, or the extinguishment of state debts. A similar measure (Surplus Revenue Distribution Act) was passed in 1836 as a bill to "deposit money among the states." The distribution was to be made quarterly, but owing to the panic of 1836, not more than three payments were made, and altho the money was regarded merely as on deposit with the states, no return or accounting has ever been called for. The public lands were again employed for purposes of distribution in 1841, when by Section 8 of the Internal Improvement Act five hundred thousand acres of public lands were granted to each state admitted after 1800. After 1845 these grants were devoted to education and were continued up to 1889, after which date specific grants under this act were made by Congress in lieu both of saline lands and the public lands. In 1849 grants of swamp lands were made to Louisiana, and became general after 1857 and were continued up to 1866. A number of states used part of the revenues from this source for education.

The next stage in the history of federal grants for education is the Morrill Act of 1862. A comparison of this act with the grants mentioned thus far brings out the following difference of principle. The grants made before 1862 were all general in character and did not prescribe specifically the nature of the institution to be established or the character of the education to be given. The Morrill Act not only made the grants for the specific purpose of establishing colleges of agricultural and mechanic arts, but prescribed part of the curriculum and the details for the management of the funds. This change of principle gave rise to several interesting points, which the opponents of the measure readily seized.

### THE CONSTITUTION AND PUBLIC LANDS

THE appropriations under the Morrill Acts involved the public lands, and at once gave rise to the question whether their distribution was constitutional or not. Senator Morrill naturally insisted that there was no constitutional objection, and based his argument on Section 3 of Article 4 of the Constitution, which provided that "Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States." The

Committee on Public Lands, which had reported against the measure, had argued against the constitutionality of federal grants in aid of education in the states. In the Senate it was cited that President Pierce had vetoed a grant to the states for insane asylums. Senator Brown, arguing in support of Senator Morrill's view, contended that since the states, thru their partnership in the federal government, owned the public lands in the aggregate, there was no reason against their owning the lands in severalty. In his veto of the measure President Buchanan declared the grants unconstitutional because the federal government had no constitutional power to enforce the application of the fund to the intended object, and because the public lands could not be used for any purposes except those enumerated in the Constitution, and these did not include education. Public lands could no more be devoted to educational objects than could direct appropriations of money.

The question of constitutionality did not take quite this form in subsequent discussion of the Morrill bills. The use of public lands for educational purposes seems to have been the natural culmination of a large number of petitions and requests for lands for educational or charitable objects. In 1826 the Committee on Public Lands had recommended the appropriation of a portion of the proceeds of the sales of public lands for the support of common schools, and in 1828 recommended grants of land for a similar purpose. In the same year a selected committee recommended grants of land to institutions for the instruction of the deaf and dumb, a recommendation repeated in 1832. A change of attitude seems to have taken place soon after, for in 1834, referring to a petition from Transylvania College, Kentucky, and Pendleton Academy, Alabama, for donation of lands, the Committee on Public Lands reported, "That the disposition of the public lands for such an object, however laudable, cannot be justified either by the Constitution or the manner in which they are held by the Government." This was the period in which Henry Clay was advocating the distribution of the surplus in the treasury, and it is not surprising that a number of states petitioned for shares in the proceeds to be applied to general internal improvements, including education. A number of other petitions of a similar general character or more specific followed during the next twenty years, so that when Senator Morrill brought forward his measure the public mind was undoubtedly prepared for a distribution of public lands for education. In 1890 he summarized the principle in the words, "It has always been regarded that the Congress of the United States has a right to dispose of the public lands for any purpose that it may see fit, provided the object shall be one of national import and equally applicable to all the states."

If the appropriation of the public lands did not prove so serious a bone of contention, the interference of the federal government in a field which was regarded as preëminently belonging to the individual states was a fertile subject for discussion at all times. In the Senate debate on Senator Morrill's first bill, Senator Pugh quoted with approval President Pierce's veto of the bill to grant aid to the states for insane asylums, and urged that if Congress could aid agricultural education, then



it could assist every species of education and in time would encroach on the whole of this field. Senator Mason and Senator Jefferson Davis supported him in this contention. Senator Clay later joined himself to these and insisted that "the powers asserted in this bill are hostile to the reserved rights and true interests of the states." President Buchanan approached the same question from a different angle. The Senators mentioned were afraid of the aggression of the federal government. The President in his veto message pointed out the danger that the states would get into the habit of asking for aid from the federal authority, and this practice might lead to the reckless use of funds which the people, not being taxed, would not control. Further, if such grants were made, the federal government would have no constitutional right to supervise them after they had passed out of their hands.

The question was not raised again until 1873, when Senator Sherman, among other objections, opposed the bill as the entering wedge for a national system of education interfering with the rights of the states. Senator Hamilton somewhat extravagantly regarded the proposed grants as "but the beginning of the end. We are to have this central government monopolize all the powers of the states, control all the local institutions of the states, and regulate and direct them in the interests of centralism, and to the utter subversion of our republican form of government." In 1890 an attempt of Senator Morrill to introduce an amendment into his bill, requiring the rendering of detailed accounts of disbursements to be made by the college treasurers to the Secretary of Agriculture and the Secretary of the Interior and prescribing the curriculum in detail, called forth from Senator Reagan the protest that "There can be but one main purpose in it, and that is to give the federal government supervision of education in the states. . . . Surely that cannot be necessary, and surely it does not recognize the fact that the systems of education in the different states belong to the states." Later in the debate Senator Reagan added: "It seems to me the purpose of the bill is to fix upon our legislation the principles that Congress is to go into the states, take charge of education and institutions, and regulate what is to be done with them." Senator Morgan, taking the same attitude, charged Senator Morrill with adding certain new features to the act of 1862, "which imply that the Congress of the United States shall take control of education in the states where colleges are situated, and that the schools shall be regulated by a law passed here and by administrative measures enacted here." Senator Hawley also pointed out that under the original act, when the states accepted the conditions, "the whole business was closed, excepting the annual report. There was no inspection except by the reports. There was no saying 'If this fund be not wisely and honestly expended we will stop it' as there is said here," that is, under the proposed amendment. In the House of Representatives Mr. Dunnell said that he had "never yet been converted to the theory that the Federal Treasury should take care of education in the several states." It was better, in his opinion, "for each state to rely upon its own resources, to develop its own intelligence, to build up its own institutions."

Seventeen years later, when the Agricultural Appropriation Bill was being discussed in the House of Representatives, Mr. Wadsworth urged as the most serious objection to the Nelson Amendment that "it opens the widest door towards centralization that this House has ever taken," and he proceeded to show how different types of educational institutions were petitioning for grants. He feared that the next step would be the public schools and with it federal governmental supervision over all education. Recent measures before Congress looking for support of education offer an interesting commentary on Mr. Wadsworth's forecast.

### THE MOVEMENT FOR FEDERAL AID FOR AGRICULTURAL EDUCATION

SENATOR MORRILL's advocacy of federal aid for colleges of agriculture and mechanic arts has been variously acclaimed either as an original inspiration or as the glorious contribution of a far-seeing statesman. Even those who have a more accurate perspective feel that some apology is due for any attempt to controvert these opinions. There is ample evidence, however, to prove: first, that the recognition of the value and importance of agricultural and industrial education was already widespread when Senator Morrill became associated with the movement; and secondly, that the advocacy of federal aid in support of this type of education had been persistent for a number of years before the act of 1862 was passed.

The interest in agricultural and industrial education was part of that general movement for a reform of school and college curriculum which began to take form in this country in the middle of the eighteenth century. It is associated with the educational activity of Benjamin Franklin and the rise of academies which sought thru an emphasis on the practical to sound a protest against the prevailing emphasis on the formal and classical. The rapid material progress that followed the establishment of independence made great demands on the resources and inventiveness of the population, and inclined it to lend a responsive ear to the glowing accounts of the value of practical education as developed by Fellenberg. This period saw the beginnings of technical and mechanical education in this country. This development, especially in agriculture, was preceded and fostered by a number of societies, which served to arouse public interest. Thus in 1785 the Philadelphia Society for the Promotion of Agriculture was established, soon died out, and was revived in 1804; in Massachusetts a similar society was incorporated in 1792 and published a *Repository* and a *Journal*; in 1804 the Society for the Promotion of Useful Arts was organized. The influence of such societies may perhaps be seen in the contemporaneous activity for the promotion of agriculture. In his annual message in 1796 President Washington had thrown out some suggestions on the promotion of agriculture. A committee reporting on this in the following year recommended that the best method for promoting agriculture was



to spread information and arouse a spirit of enquiry, which could be done by the organization of a national society for the encouragement of agricultural improvements. Such a society could elect a number of its members to serve as a National Board of Agriculture. In 1817 the Berkshire Association for the Promotion of Agriculture and Manufactures petitioned Congress to establish a National Board of Agriculture.

Local interest in the subject is indicated by the appropriation in 1819 by the New York State Legislature of \$10,000 a year for two years—later extended to four—to be distributed among county agricultural societies for the “promotion of agriculture and family domestic manufactures.” This precedent was followed in 1820 by the Pennsylvania Legislature, which permitted the counties to levy taxes for similar purposes. One of the earliest references to formal training in agriculture is contained in a bill in the New York Legislature in 1823 for the establishment of a state school of agriculture. That governments were beginning to develop a tender conscience and solicitude for the laboring classes of the country is shown in a report of the House Committee on Public Lands on the distribution of the proceeds of the sales of public lands for the support of common schools (1826). The report, which favored an appropriation of public money, contains the following: “Our panoply in peace or war must be the heaving bosoms and vigorous arms of enlightened and virtuous freemen. . . . Who are the first to be benefitted? The children of farmers, mechanics, and manufacturers. Where do we look, and where must we look, for the moral and physical powers of the nation? To the agricultural and mechanical interests—to the handicraftsmen of the land.”

For the time being the enthusiasm for agricultural education had apparently reached its height. Interest, however, was soon revived and remained persistent until the movement was crowned with success in 1862. The revival began in 1838, when the Senate Committee on Agriculture planned to “do something for agriculture” by the establishment of an agricultural depository in the hands of the Commissioner of Patents. The plan was advocated by Henry L. Ellsworth, then Commissioner of Patents, and included besides the collection and distribution of seeds and plants, the publication of an annual report. In suggesting the plan Ellsworth says: “For commerce and manufactures, much has been done; for agriculture, the parent of both and the ultimate dependence of the nation, much remains to be done.”

In the same year there was presented to Congress a memorial of Charles L. Fleischman on the subject of improving the agriculture of the country by the establishment of agricultural schools. Fleischman describes himself as a native of Bavaria, a graduate of the Royal Agricultural School of Bavaria, and a naturalized citizen. He refers to the attempts to improve agriculture by the European countries, and even by Asiatic Russia, thru the organization of agricultural societies, publication of experiments, and award of prizes, but all these had proved unsuccessful. Progress began only when schools were established to educate young men scientifically and practically. This education included practical work, “together with the use of all

the implements and machines, as well as all the minutest branches of husbandry." America was still relying on imitation and magazines rather than on scientific training, altho "chemistry has made great progress and has been especially treated in reference to agriculture." Science could then predict results with accuracy. Too long had the English system been followed, while Germany and other parts of Europe, offering better models, were neglected. Since there was no doubt about the utility of a science of agriculture, schools should be established where should be taught "pure mathematics, such as arithmetic and geometry; the practical application of it in mensuration, surveying, mechanics, hydraulics, hydrostatics, architecture, civil engineering, etc.; natural philosophy, chemistry, and its application to practice; zoölogy, botany, mineralogy, and geology; drawing; the veterinary art; and agriculture in all its branches." Fleischman renewed his memorial at the close of the same year; it was ordered to be printed in January, 1839, and to be reprinted in March, 1840. In his second memorial he advocated the application of the Smithsonian bequest for agricultural schools and the establishment of agricultural institutions to be the nurseries of scientific agriculturists and to do away with the haphazard methods of imitation. He then elaborated in more detail the suggestions for study presented in the earlier memorial. It is interesting to read that he recommends the inclusion of experimental farms and workshops.

The disposal of the Smithsonian legacy<sup>1</sup> appears to have attracted the attention of others besides Fleischman. In 1840 the Kentucky State Agricultural Society recommended the application of the fund to the establishment of agricultural schools. Similar recommendations were made in 1841 by the National Agricultural Society organized for the promotion of agricultural education, and in 1848 by the New York State Agricultural Society. In 1846 a committee of Congress was appointed, with Robert Dale Owen as chairman, to consider the subject, and reported in the same year that "Whereas the general diffusion of knowledge may be accomplished most effectively thru the common schools: and whereas knowledge may be essentially increased by scientific research and by spreading a taste for science and the arts," therefore the fund should be used to establish a school. It was urged that this school should provide for "a professor of agriculture, a normal department, a professor of common school instruction, and such other professors, chiefly of the more useful sciences and arts, as may be necessary for such a thorough scientific and liberal course of instruction as to qualify men for teachers of the more important branches of science." The committee specifically mentioned that the scheme should not include "any school of law, medicine, or divinity, nor any professor of ancient languages." The report, altho significant historically, was not accepted by Congress.

Evidence that the movement reached Senator Morrill's own state may be found in a report of the Committee on Education of the Legislature of Vermont issued in 1840,

<sup>1</sup> This was a bequest of \$515,169 made by James Smithson to the United States "for the increase and diffusion of knowledge among men." The bequest was paid over in 1838.



urging that the legislature should not be satisfied until they have provided means of instruction in all branches of science which may be desirable for any class of the community; thus the mechanic and farmer need education in branches which are immediately connected with their occupation.

Fleischman's memorial was soon followed by two memorials and a petition presented by Joseph L. Smith and others. The memorialists requested that the Senate Committee on Agriculture be instructed to make an annual report on the agricultural interests of the Union, and recommended that agricultural and horticultural instruction be introduced into primary and other schools. The petition calls for the establishment of a department of government to be called the Department of Agriculture and Education, and to give instruction in agricultural pursuits. Such a department would increase the prosperity of the country. In the following year, 1841, Professor Alden Partridge<sup>1</sup> presented a memorial to Congress to establish a general system of education, embracing political economy, science of government, practical engineering, military science and instruction, architecture, and other subjects. Professor Partridge's contention is that the English practice has been followed too long; and a new type of education is needed by a democracy and should be supported out of the apportionment of the proceeds of sales of public lands. The memorial then outlines institutions which correspond closely to the later agricultural and mechanic arts colleges. By education he understands "the preparing of a young man, in the best possible manner, for the correct and efficient discharge of the duties of any situation in life in which interest or inclination may place him."

To this list of memorials must be added those of John S. Skinner. In 1843 Mr. Skinner presented a memorial to the Senate respectfully soliciting "an appropriation, to be applied, under the direction of the state governments . . . to the establishment of institutions for instruction in geology, mineralogy, and vegetable and animal physiology; in civil engineering, as applied to roadmaking, bridge building, and other rural architecture; and also to instruction in the mechanical principles on which depend the labor-saving properties and efficiency of agricultural implements and machinery." Agricultural schools might perform the same service for agriculture as the United States Military Academy for war purposes. This interest in an agricultural school spread as far as California, for in 1854 the Committee on Agriculture reported unfavorably on a memorial from Messrs. Warren and Son, and others of that state, praying for such a school.

The above list should be supplemented with a reference to the notice given in the Second Session of the Thirtieth Congress (December 18, 1848, and February 8, 1849)

<sup>1</sup> Professor Alden Partridge (1785-1854) graduated from the United States Military Academy in 1806, and in the same year was there appointed assistant professor of mathematics. In 1813 he became professor of engineering, and from 1815 to 1817 was superintendent of the Academy. Professor Partridge thru his profound interest in education was a keen critic of the prevailing system that made no provision for practical and scientific training. In 1819 he was instrumental in establishing the American Literary, Scientific, and Military Academy, which later developed into Norwich University, at Norwich, Vermont. He was closely associated personally and thru his graduates in founding a number of other academies on the model of West Point and Norwich.

by Mr. N. K. Hall of New York that he would introduce "a bill making a donation of public lands to the several states and territories to be by them appropriated to the encouragement and improvement of agriculture of such states and territories."

In 1850 Dr. Daniel Lee contributed to the annual Report of the Commissioner of Patents an abstract of a report by Professor Hitchcock of a study made at the request of the Massachusetts Legislature, on agricultural education in Europe. Mr. Lee takes the opportunity of pointing out how deficient the United States is in this field, and shows that progress must be delayed owing to the lack of suitable teachers. To remedy this defect, he advocated that Congress "establish an institution of the scientific grade of West Point Academy, and procure such gentlemen as Liebig, Agassiz, and Boussingault, to serve as teachers until a reasonable number of talented Americans could be prepared to fill professorships in State Agricultural Colleges."

The Report of the Commissioner of Patents for 1851 contains three articles of interest in the present survey. The first of these was a letter from Mr. Harvey Dodge advocating the establishment of agricultural schools and experimental stations. Mr. Dodge suggests that the time of the students should be divided equally between class instruction and practical work. He includes in his plan the recommendation of a large agricultural institution, to be established by Congress, with smaller schools in each state. The second is a reprint of an address on agricultural education delivered by Mr. Milton P. Braman before the Agricultural Society of Essex County, Massachusetts. Mr. Braman urges the establishment not only of agricultural schools of elementary grade, but "schools on the plan of those in Europe, taught by men versed in all sciences connected with the cultivation of the soil, and to which lands are attached for the purpose of experimental and practical farming." Those who study in these schools will serve as guides and leaders in their districts; specialization would make farming more attractive as a career, and more profitable and productive in the older parts of the country. Professor Jonathan B. Turner's paper, the third to be included in the Report, dealt with a *Plan for an Industrial University*, advocating a new type of education consonant with the needs of the age.

From this time on the state legislatures began to turn their attention to the subject of agricultural education. In 1847 the New York State Committee on Colleges, Academies, and Common Schools reported in favor of establishing a school in the state for the promotion of "agriculture and the mechanic arts." This movement was supported in the following year by the New York State Agricultural Society, which presented a plan for an agricultural school as part of the public system of education, and, as mentioned above, advocated the application of the Smithsonian fund for this purpose. In 1850 the legislature of Michigan passed a resolution petitioning the federal government for funds to establish an agricultural school.

In 1852 the Michigan State Normal School offered four courses of "instruction in the mechanic arts, the arts of husbandry, and in agricultural chemistry," and in 1853 the State University organized an agricultural school as a part of the science



course recently adopted, with the Rev. Charles Fox, one of the editors of the *Farmer's Companion and Horticultural Gazette*, and later the author of a widely used *Text-book of Agriculture* (1854), as the first professor of agriculture.

Two years later the Massachusetts Legislature urged Congress to make a grant of public lands for a "national normal, agricultural college, which should be to the rural sciences what West Point is to the military, for the purpose of educating teachers and professors for service in all the states of the republic."

There is thus sufficient evidence that by the middle of the nineteenth century the need of agricultural education was definitely recognized, and more than that, it had been pressed on the attention of Congress in various ways. It is true that no one had yet drafted a scheme on which a national system could be based, but, as will be shown in another section, the apportionment of the proceeds from the sales of public lands for the purposes of education had been suggested more than once. It remained for the legislature of Illinois to frame a resolution combining all the features so far discussed: distribution of public lands to each state in the Union for the maintenance of institutions for the promotion of practical training in agriculture and industries. These resolutions were the outcome of a movement among the farmers of Illinois which began in 1851, and in which Professor Jonathan B. Turner was the leading spirit. Since so much influence is attributed to the resolutions, they are here reprinted.

*Whereas*, the spirit and progress of this age and country demand the culture of the highest order of intellectual attainment in theoretics and industrial science; and

*Whereas*, it is impossible that our commerce and prosperity will continue to increase without calling into requisition all the elements of internal thrift arising from the labors of the farmer, the mechanic, and the manufacturer, by every fostering effort within the reach of the government; and

*Whereas*, a system of Industrial Universities, liberally endowed in each state of the union, co-operative with each other, and with the Smithsonian Institute at Washington, would develop a more liberal and practical education among the people, tend to more intellectualize the rising generation and eminently conduce to the virtue, intelligence and true glory of our common country; therefore be it

*Resolved*, by the House of Representatives, the Senate concurring herein, That our Senators in Congress be instructed, and our Representatives be requested, to use their best exertions to procure the passage of a law of Congress donating to each state in the Union an amount of public lands not less in value than five hundred thousand dollars, for the liberal endowment of a system of Industrial Universities, one in each state in the Union, to co-operate with each other, and with the Smithsonian Institute at Washington, for the more liberal and practical education of our industrial classes and their teachers; a liberal and varied education, adapted to the manifold wants of a practical and enterprising people, and a provision for such educational facilities being in manifest concurrence with the intimations of the popular will, it urgently demands the united efforts of our strength.

*Resolved*, That the Governor is hereby authorized to forward a copy of the foregoing resolutions to our Senators and Representatives in Congress, and to the Executive and Legislature of each of our sister States, inviting them to co-operate with us in this meritorious enterprise.

On December 7 of the same year Mr. Lyon gave notice in Congress that he would ask leave to introduce a bill for the establishment of a national agricultural college and experimental farm.

The states did not seem disposed to wait for Congressional action on the matter. Three agricultural schools were established before Senator Morrill began his campaign for federal aid. In 1854 Pennsylvania established a state agricultural school, followed in 1855 by Michigan. In the latter year New York State voted \$40,000 for an agricultural school at Ovid, provided the friends of the school collected a similar amount. In 1856 Senator Morrill took up the question and offered a resolution in the House of Representatives to the effect "that the Committee on Agriculture be requested to inquire into the expediency of establishing one or more national agricultural schools upon the basis of the naval and military schools." This resolution does not seem to substantiate the claim of those who insist not merely that Senator Morrill was directly inspired by Professor Turner, but that he was even selected by him because of his interest in agriculture and as a representative of one of the older states to lead the movement in Congress. Evidently in 1856 Senator Morrill had no definite plan in mind. Whether he ever had a clear idea of what the institution sponsored by him really stood for must be gathered from an examination of the evolution of his views during the thirty years of his advocacy of agricultural education.

## HIGHER AGRICULTURAL EDUCATION IN EUROPE .

IN the speech in which he introduced the bill for the distribution of land grants for the support of agricultural and mechanical education, Senator Morrill referred enthusiastically to the extensive facilities afforded by most European countries for the study of agriculture. Some of the advocates of federal aid for agricultural education also based their petitions on European examples. In 1851 Professor Hitchcock reported on agricultural education in Europe to a commission appointed by the Massachusetts legislature to enquire into the general question of agricultural education. He found three hundred and fifty-two institutions giving agricultural education of varying degrees, of which twenty-two were superior schools and fourteen were connected with colleges and universities. The two earliest agricultural colleges were started in 1797 at Hofwyl in Switzerland and Krumau in Bohemia. Few educational institutions have had as great an influence in the advancement of agricultural and technical education as Fellenberg's school at Hofwyl, but this influence was mainly exercised on institutions of lower grade than colleges. The advanced study of agriculture,



indeed, was dependent on the development of applied chemistry, with the consequence that the higher institutions were necessarily of later growth than the lower, which were hardly more than apprenticeship schools.

Abbé Rosier was one of the earliest advocates of agricultural education in France when in 1775 he made the suggestion, repeated in 1789, that a Royal Park at Chambord be converted into an agricultural school. In 1789, too, Lavoisier recommended to the Convention the establishment of an institution for scientific instruction in agriculture. When the French educational system was reorganized under Napoleon no provision was made for agriculture because, as was explained to the legislature, "it is the duty of landed proprietors to teach this great art practically on their own estates, and of the agricultural societies to make known good practices in their respective departments." It was also added that the natural sciences applicable to all branches of rural economy would be taught in a sufficiently large number of schools to enable all who desired progress in agriculture to obtain the requisite knowledge. No aid could therefore be expected from the government. In 1818 M. Dombasle founded an agricultural school at Roville, which with the aid of private subscriptions had a successful career until its decline in 1842. The institution attracted wide attention not only thru its work but also thru its publication, *Annales de Roville*, and in 1831 received some slight subsidy from the government. Probably under the influence of the Roville experiment, the Royal Agronomic Institution was established in 1827 at Grignon, near Versailles. A government grant of \$12,000 annually was paid to the institution. The Grignon school was followed in 1830 by a private foundation at Coetbo, and in 1833 by another at Grand Jouan, which was established by a pupil of M. Dombasle and received departmental subsidy. The Grand Jouan institution became a regional school in 1842. The success of these institutions aroused in the government and the General Council of Agriculture an interest in agricultural education. A committee was appointed and reported in favor of the establishment of farm schools to furnish elementary instruction in agriculture, of regional schools to provide the next stage, and of a superior national institution in Paris. These recommendations were embodied in a decree adopted on October 3, 1848, with the exception that the National Agronomic Institution remained at Grignon.

Some interest in agricultural education began to be shown in Germany in the eighteenth century. The movement was connected with the establishment of realistic schools, and in particular with the interest of Frederick the Great in promoting the development of agriculture in his state. Further impetus was given to the movement by the practice of Pestalozzi and Fellenberg. In 1802 Albrecht D. Thaer (1752-1828), author of the *Principles of Rational Agriculture* and numerous other works on agriculture, established an agricultural school at Celle for purposes of scientific exposition and demonstration. Four years later he was invited by the King of Prussia to move his school to Möglin. Here the Akademie des Ackerbaues or Höhere Lehranstalt für Landwirthschaft attracted much attention and found many

imitators throughout Germany, among which were the following: Hohenheim (1818), Idstein (1818), Schleissheim (1822, later moved to Weißenstephan), Jena (1826), Tharandt (1829), Eldena (1835), Regenswalde (1842), Proskau (1847), Weende (1851), Waldau (1858). After 1861 a movement, inspired by Friedrich Gottlieb Schulze, the founder of the agricultural institute at Jena, began for the abolition of separate institutions and for the establishment of agricultural institutes in the universities. This practice was endorsed by Liebig, whose contributions to agricultural chemistry more than anything else placed the study of agriculture on a scientific basis. Agricultural institutes were established at Halle (1862), Leipzig (1869), Giessen (1871), Königsberg (1876), and Kiel and Breslau (1881). The agricultural institute opened in Berlin in 1868 became the *Königliche Landwirtschaftliche Hochschule* in 1881.

In addition to the higher institutions there was developed in Prussia a system of middle agricultural schools of the same grade as six year secondary schools. These *Landwirtschaftsschulen* were established about 1875, so that they exercised no influence on Senator Morrill. Another type of agricultural schools (*Ackerbauschulen*) was of a lower grade school and arose at the beginning of the century to furnish elementary instruction in agriculture. In 1851, the date of Professor Hitchcock's report, there were in Germany twelve superior institutions for agricultural education, of which three were connected with universities, sixteen intermediate, and forty-nine lower schools.

England offered but little encouragement to those who in this country were interested in the promotion of agricultural education. It was not until 1845 that the first agricultural college was established at Cirencester by the subscription of the local gentry. The plan was proposed in 1842, and the charter of the college declared its purpose to be the "teaching of the science of agriculture and the various sciences connected therewith, and the practical application thereof to the cultivation of the soil and the rearing and management of stock." In 1880 the institution became the Royal Agricultural College. The government only began to assist agricultural education in 1882, when it established a lectureship in agriculture at the Normal School of Science in London, and about the same period the Department of Science and Art included among its examinations one on the principles of agriculture. Scotland had preceded England by the founding of a chair of agriculture at Edinburgh University in 1790 by Sir William Pulteney, which was held for forty years by Dr. Coventry. At Marischal College, Aberdeen, a lectureship in agricultural chemistry was established in 1840. Professor Hitchcock reported five institutions in England, of which one only was of superior grade, and the two lectureships here referred to in Scotland.

Ireland had far more to offer by way of example. Here Professor Hitchcock found one superior school, twenty-five intermediate, and thirty-four inferior schools of agriculture as well as three chairs of agriculture in university colleges. In 1838 the superior agricultural school was established at Glasnevin with a model farm attached. At the



same time a number of model agricultural schools, corresponding to the intermediate schools referred to by Professor Hitchcock, were organized under the Commission of National Education. Elementary or ordinary agricultural schools were also established by local patrons at this period, and agricultural departments were opened in work-houses and juvenile reform institutions. Professorships of agriculture were founded at each of the Queen's Colleges at Belfast, Cork, and Galway. The professors had the use of model farms and botanical gardens, and offered two year courses leading to diplomas. For that period Ireland, considering her population, offered better facilities for scientific training in agriculture than any other country.

Of the other European countries to which Professor Hitchcock refers, Italy had one inferior school, and one institute connected with a university; Austria had four superior schools, three inferior schools, twenty-five schools for special branches, and one university institute; and Russia had two superior schools, ten intermediate and fifty-one inferior schools, four schools for special branches, and one university institute.

The European situation had much in it that was helpful to those who were interested in agriculture in this country. The movements almost coincided in point of time. The European schools not only offered an example in the matter of curriculum but—and at the time this was more important for the propagandists in this country—showed the great interest taken by the governments in this type of education.

### SENATOR MORRILL AND HIS COLLEGES

It is no depreciation of the merit of Senator Morrill's service to education to say that he builded better than he knew. Whatever his motives in undertaking the advocacy of the measure to secure federal aid for agricultural education, it is difficult to resist the opinion that he had no definite picture in mind of the kind of institution that he was helping to build up. Indeed, the whole subject of agricultural education and policy forms but a meagre portion of the many hundreds of pages given to the discussion of the subject of federal aid for colleges of agriculture and mechanic arts. The evolution in Senator Morrill's mind during the thirty years of his advocacy of the subject indicates a gradual departure from his original idea. When, in 1857, he urged the establishment of the colleges of agriculture and mechanic arts, it was on the ground that agriculture was declining thru lack of scientific knowledge and that each profession should be given an opportunity to educate itself. "The farmer and the mechanic require special schools and appropriate literature quite as much as any one of the so-called learned professions. . . . It is plainly an indication that education is taking a step in advance when public sentiment begins to demand that the faculties of young men shall be trained with some reference to the vocation to which they are to be devoted through life." The outline which he presented of the definite purposes of such colleges was more applicable to an agricultural research bureau and laboratory than

to institutions for training young students. The educational aspects, however, did not interest his colleagues, for neither supporters nor opponents discussed them in the House of Representatives or in the Senate. The same remarks apply equally to the successful measure that passed in 1862, which established the colleges. Still less was said on mechanic arts than on agriculture.

Ten years later Senator Morrill was a little more explicit. When advocating an increase of the endowments of the land grant colleges in 1872, he urged that, by the act of 1862, "it was clearly intended that these national colleges should place scientific or practical studies foremost as the leading object, and whatever else might be added, that these were in no case to lag in the rear." He regarded the measure as one "that will lift up the intellectual and moral standard of the young and industrial classes of our country." Later in the same debate he declared that it was a misnomer to call the institutions agricultural colleges; they were "schools for the benefit of agriculture and the mechanic arts," whose purpose, as he subsequently explained, was to provide a "broad education, intended to be sure to reach the agriculturist and to reach all our industrial classes." From this time on he began to refer to them as national colleges. His explanations, however, appear to have failed to clear up the doubts of some of his opponents. Senator Thurman, for instance, said, "I should like some Senator to get up and tell me what he understands by an 'agricultural college.' . . . If it is not to be a place in which practical agriculture is taught by manual labor, but simply theoretic agriculture is taught, I should like to know wherein it differs from any good college there is now in the United States in which applied chemistry, applied mathematics, and applied mechanics are taught, and botany and all. . . . I happen to know a board of trustees of an agricultural college, and they have been pondering ever since they were appointed, and I think it is about two years, and they have never been able to this day to decide what an agricultural college is."

When in the following year, 1873, Senator Morrill again brought in a bill to increase the endowment of the land grant colleges, they had become "national colleges for the advancement of general science and industrial education." In advocating support for these colleges in 1874 Senator Morrill's vision was still broader; agricultural education was no longer the predominant purpose for which they had been founded; on this occasion their importance for technical and industrial education was emphasized. "These colleges," he stated, "are often called 'agricultural colleges,' perhaps because here for the first time agriculture obtained equal favor, or even any attention, or because several states have given that name to their institutions as an honorable distinction, or perhaps the term may be sometimes derisively applied, as though it were an absurdity to expect any growth of science and learning from an agricultural college; but while it is true that all sciences related to agriculture are to be included and must be and are taught in these national institutions, though not to so great an extent as it is hoped that they yet will be, there is nothing excluded touching any other industrial, mechanical, or even classical interests." As to the charge that the



graduates of these institutions did not take up agriculture as a vocation, he said, "They have the right to do that or anything else they choose; to be artists, mechanics, surveyors, merchants, teachers, lawyers, doctors, or ministers, but whatsoever they are, they will be better for being thoroughly and scientifically equipped, and they will also be able to tender more or less valuable aid to all branches of industry, despising none."

By 1880 Senator Morrill had clearly forgotten the purpose of the act of 1862, for he defined it thus: "The object of the law was not to injure any existing classical institutions, but to reinforce them and bring liberal culture within the reach of a much larger and unprovided for number of the industrial classes in every State. It was designed to largely benefit those at the bottom of the ladder who want to climb up, or those who have some ambition to rise in the world, but are without the means to seek far from home a higher standard of culture. This and more was sought to be accomplished by bringing forward, at less cost of time and money, courses of study of greater use in practical affairs than those, then largely prevailing, which seemed to offer little of lasting value beyond the mere discipline imposed." It was this view also that he expressed in 1890 when he declared that "The most advanced studies were not, it will be remembered, to be excluded from these colleges, and whenever provided with sufficient resources they should be ready to offer all the learning demanded by any portion of the American people, and yet they must not fall short in the branches related to agriculture and the mechanic arts, but must lead in the highest instruction asked for by the industrial classes." He expressed himself more explicitly when he proposed to amend an amendment introduced by the Committee on Education and Labor requiring a statement in the annual reports from the colleges "showing specifically its application to instruction in agriculture and the mechanic arts and the facilities for such instruction." To this amendment Senator Morrill proposed to add the words "including the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life and in a thorough training in English." This amendment met with considerable opposition and was withdrawn. Some of his audience, however, seemed still to cling to the original interpretations of the act of 1862. Thus Senator George, a strong supporter of Senator Morrill's proposal, said, "These agricultural colleges, in my opinion, have done more good and are likely to do more good in the near future for the advancement of the great farming interests of this country and the great mass of people than all the rest of the colleges and universities put together." This dual interpretation was also reflected in the report of the Committee on Education and Labor on the bill that "Although in the popular mind they are intimately associated with the advancement of the fundamental pursuit of agriculture, yet they are equally devoted to the diffusion of scientific education as applied to the mechanic arts, and thus they embrace within their jurisdiction the whole field of the practical application of science to the wants and welfare of man." And Senator Blair, also a supporter of Senator

Morrill and himself a strong advocate of federal aid to education, declared that "the people of the country, the common people of the country, 'we, the people,' are turning to these industrial institutions for the education of the rising generation with a vastly increased sense of the importance of industrial education as compared with education in any other form." In the House of Representatives Mr. Joseph D. Taylor attempted, with greater success than had attended Senator Morrill's efforts earlier, to meet the difficulty of interpretation by an amendment confining the proposed appropriation "to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries in life, and in the facilities for such instruction," for "the trouble is that in some of the states there is very little difference between an agricultural college and a literary college." The last statement is a clear expression of the confusion that was bound to result from the inadequate conception of the type of institution Senator Morrill desired to have established when he secured the passage of the act of 1862.

### THE PUBLIC LANDS AND POLITICS

SENATOR MORRILL, in undertaking in 1856 to promote agricultural education with the aid of federal grants, was at once meeting the numerous demands for measures to improve agriculture and to distribute the public lands. It is not impossible that the promotion of these two objects was part of a much larger purpose—the winning over of the agricultural interests to his party and policy. Senator Morrill's name, intimately associated as it is with the land grant colleges, is still more closely connected with tariff issues. As Senator Morrill himself said when introducing his first bill, Congress had legislated for all other branches of the community while "All direct encouragement to agriculture has been rigidly withheld," but "when commerce comes to our doors, gay in its attire and lavish in its promises, we 'hand and deliver' at once our gold. When manufactures appears, with a needy and downcast look, we tender, at worst, a 'compromise.'" Something evidently had to be done to compensate the farming interests for the protection afforded to the industrial branches.

For nearly three decades the public lands had played an important part in politics, and were used as occasion demanded to play off one section of the country against another. Writing of the period about 1828, Professor R. G. Wellington<sup>1</sup> says: "The struggles of sections were centering about these three economic issues—tariff, public lands, and internal improvements. The interest of the different sections in these issues, in the order of their importance was as follows: The Northwest—low-priced public lands, internal improvements, a high tariff; the Southwest—low-priced public lands, a low tariff, internal improvements; the seaboard South—a low

<sup>1</sup> Wellington, R. G., *The Political and Sectional Influence of the Public Lands*, page 9 (Boston, 1914).



tariff, no internal improvements at federal expense, high-priced public lands; the North Atlantic States—a high tariff, high-priced public lands, internal improvements.” When in 1829 Mr. Hunt of Vermont proposed to distribute the annual proceeds of the public land sales among the states for education and internal improvements, an Alabama representative declared that the bill “will serve as a pretext for keeping up the high rate of duties and for continuing the exactions on the South.” The South believed that the policy of the Whigs was to empty the treasury of any existing surplus in order to perpetuate the national debt and so the tariff. In 1832 Clay proposed a division of the proceeds of the sales of the public lands “for the purpose of education, internal improvements or colonization, or the reduction of any state debt.” His opponents charged him with the intention of disposing of the surplus by distributing the land revenue in order that the duties on imports might be kept up.

Summarizing the period, 1828–42, in which party policies were developed, Professor Wellington makes the statement (page 115) that “with the growth of sections having conflicting economic interests the disposition of the public lands became a subject for sectional alliances and political bargainings.”

When Senator Morrill made his first proposal to distribute the public lands, the country was passing thru a serious financial crisis, which Professor Taussig attributes to activity, speculation, overbanking, panic, and depressions. Measures had to be taken to check the financial stringency. The tariff was passed for this purpose, in order that “by reducing duties the revenue would be diminished, money would be got out of the Treasury, and the stringency, which was already threatening, prevented.”<sup>1</sup> It is possible that the first Morrill bill of 1857 was an attempt to secure circulation by means of the sales of public lands. Senator Jefferson Davis was inclined to suspect the motives underlying the proposal to establish agricultural colleges, and said bluntly that the bill was “delusive, not to say fraudulent.” The farmers did not need such legislation. “The agricultural interest takes care of itself and is drained to take care of every other pursuit in the country. I have looked upon it as a mere sham for other pursuits draining and to drain the agriculturist, to come and say, ‘Let us do something for the agriculturist.’” Senator Clay of Alabama was of the same opinion. Speaking for the agriculturists of his own state he said, “All they ask is sheer justice and no favor. They ask that you let them alone to work out their own progress; that you will keep your hand out of their pockets and let them appropriate their own honest gains, instead of filching them for the benefit of other interests.” President Buchanan in his veto message emphasized the point that the treasury could not at that time afford to lose the revenue from sales of public lands.

The tariff of 1861 was obviously a measure to raise the revenues for war purposes. At the same time it is not improbable that the Morrill Act was passed at this critical period to offset not only the tariff but also the internal taxes imposed on domestic

<sup>1</sup> Taussig, F. W., *Tariff History of the United States*, page 118 (New York, 1910).

producers. The protectionists could better satisfy their leanings if the treasury were emptied of the public land revenues. The high tariff was kept up for some years after the war, but by 1872 opposition began to make itself felt. "The prices of manufactured goods were then high, and imports were large. On the other hand, exports were comparatively small and the prices of grain and provisions low. The agricultural population was far from prosperous."<sup>1</sup> The farmers felt that the tariff was among the burdens under which they were suffering. It was in 1872 that Senator Morrill began his agitation for an increase of the endowments of the land grant colleges. Speaking on this bill, Senator Sherman argued that an expenditure of the same proposed at a time when the national expenditures were beginning to equal the receipts was unwarranted. Senator Thurman made the same point when he said that this was not the time to vote away money "as if the Government did not owe a dollar, as if money was as plentiful as the leaves of the forest, as if there were no cry from one half of this Republic, as there is at this moment, that the stringency of the money market never was equalled . . . as if there was nothing in the world to do but to pass appropriation bills." When the bill was again called up, Senator Thurman opposed the measure in another long speech in which occurred the following statement: "If you want to assist agriculture quit subsidizing and protecting every other industry in the country, while you do not subsidize or protect agriculture at all. That is the way to assist agriculture. Take off that heavy hand of taxation that you put upon every agriculturist in this country, for the benefit of other people; quit maintaining other industries, or making them profitable by the public money or protective law, and let every industry stand upon an equal foundation in this land, and you will do more for agriculture in one single year than all those institutions will do in a century or ten centuries." Senator Tipton stated openly, "Then this bill is a fraud upon its face; it is a cheat; it is delusion, barefaced and bald as ever was presented for the purpose of gulling an unsuspecting and confiding constituency in this: it says to them 'we are lifting off you the burden of taxation; and yet we have a process by which we take out of your pocket \$50,000,000 and apply it without placing upon you any burden whatever.' Every dollar in the Treasury is pledged for the payment of public debt. Every dollar to-day in the Treasury is under a sacred mortgage. Every dollar taken out of the Treasury for this purpose has to go back in some other form, and when you take out to-day a million dollars and give it to the agricultural colleges, you tax the people a million dollars to-morrow and put the million back into the Treasury to place it under the mortgage from which you released a million yesterday. . . ."

The next step in the history of both the land grants and the tariff was marked by the legislation of 1890, when Senator Morrill definitely repudiated the public lands as an adequate source of revenue and referred to the coming change in the tariff. "No matter what party may be in power," he said, "in any adjustment of revenue measures, these undetermined rivulets, whether continuing to flow or not to flow, will not

<sup>1</sup> Taussig, F. W., *Tariff History of the United States*, page 180 (New York, 1910).



be relied upon, as they have never been relied upon, for the ordinary support of the government." Later in the same address he repeated this opinion in another form, namely, that "uncertain receipts from miscellaneous and fluctuating sources interfere with all regular estimate of revenue, and the permanent disposal of whatever amount may hereafter be received from some of these irregular sources would prove a wholesome measure, provided the objects promoted or to which they may be assigned are found to be wholesome and of sufficient national importance. A surplus cannot always be applied advantageously to the reduction of the unmatured public debt, and idle funds in the Treasury . . . beget danger of needless and possibly wild projects for massive expenditures."

This aspect of the question under discussion also came up in the House of Representatives. Mr. Turner of New York expressed the views of the opposition when he said, "The real animus, the real purpose of this legislation is simply this: The agricultural classes are in a state of unrest, and the great agricultural communities that have given Republican majorities year after year are asking themselves to what end they have given those majorities. Now . . . if you give the farmer the same chance that you give the manufacturing class, if you will remove from him the burden of unjust tariff taxation that has weighed heavily upon him for a quarter of a century, he will be able to educate his own sons in his own way without governmental aid."

Taken by itself, the evidence presented in this section may not be conclusive, but considered in connection with Senator Morrill's vacillating conception of an agricultural college, his own position at various times as member of the ways and means committee of the House of Representatives and of the finance committee of the Senate, and his pronounced protectionist leanings, it at least affords a foundation for the presumption that Senator Morrill associated the needs of the tariff with the necessity of securing the support of agricultural interests. This combination he sought to obtain by disbursing treasury revenues from public lands to aid colleges which he hoped would somehow benefit agriculture and placate the agricultural interests. With their support the treasury could be replenished thru his tariff measures, which had the warm assistance of the manufacturers. If it is true that the land grant colleges were a pawn in the political game, Senator Morrill's vacillation between the original agricultural and mechanic arts college for the benefit of agriculture and the national colleges of science for the benefit and promotion of all industries of the country can be explained.

### MILITARY TRAINING IN LAND GRANT COLLEGES

THE requirement of military training in land grant colleges did not appear in the first bill presented in 1857, but was added in 1862 on the outbreak of the Civil War. Each state accepting the grant was required to appropriate the funds "to the endowment, support and maintenance of, at least, one college, where the leading object

shall be, without excluding other scientific and classical studies, *and including military tactics*, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Little attention was given to this requirement of military training in the land grant colleges during the debate on this bill. In 1872, when Senator Morrill introduced a bill to increase the grants to the colleges established under the act of 1862, he made the most extended remarks on the subject: "Our popular form of government, however peacefully disposed, does not challenge the hearty sympathy of other less popular Governments. Peace may not forever be possible; and we must remember that in war victory follows neither the greatest nor the most guns, but follows the party which can make and know how to use the best—does not follow absolutely the largest army, but the best handled and the most sagacious. All of these national colleges are to give some military instruction, and this, so widely diffused and multiplied, in any great future war, will be of vastly more service than even our present Naval and Military Academies, however admirably they may be conducted. In time of peace, and without annual appropriations, we shall have made our best preparations for war."

Discussing the measure of 1890, Senator Morrill referred to the value of military training as part of the curriculum of the land grant colleges. "Military tactics," he said, "also were included among the subjects to be taught in the land grant colleges, and . . . the thousands of trained young men who annually graduate from these colleges, should our country ever need their services, will not forget how 'to set a squadron in the field,' and will be found, as a reserve force, of immense value—a value hardly less than that confidently relied upon from our renowned national institution at West Point."

This, however, was practically all the attention given to the subject during the debates on the land grant colleges. This phase of the work of the colleges was dealt with in supplementary bills directing the War Office to detail officers to take charge of the instruction in military tactics. By an act passed in 1866 the detail of army officers as instructors in land grant colleges was provided for; in 1888 and again in 1891 the number and duties of these officers was further defined.





### PART III

#### SUBSEQUENT DEVELOPMENTS OF THE MORRILL ACT





## RECENT MOVEMENTS FOR FEDERAL GRANTS FOR EDUCATION

THE Morrill acts and the acts supplementing these have for many years been used by politicians and others as precedents for extending the appropriation of federal grants to other forms of education besides agriculture. The pressure on the federal government for an extension of its munificence has never been so insistent as during the past six years. Scarcely a session of Congress has passed since 1910 without the presentation of a number of bills for this purpose. In 1910 Senator Jonathan P. Dolliver of Iowa introduced a bill to provide federal grants "to coöperate with the states in encouraging instruction in agriculture, the trades and industries, and home economics in secondary schools; in preparing teachers for those vocational schools in state normal schools." This bill he amended later in the year to provide coöperation in maintaining extension departments in state colleges. These extensive provisions were based on the recommendations of a committee to the Association of American Agricultural Colleges and Experiment Stations made at the annual conference in 1909. The committee suggested the appointment of a director and field agents in each land grant college and financial support from the federal government. The extension work was to be confined to agriculture, domestic science, and other phases of rural life; technical, scientific, and business management; homemaking; sanitation; and economic, social, and moral subjects for adults and youth and children in towns and cities as well as in the country. The Dolliver bill has been the starting-point of the proposed legislation along these lines. In the House of Representatives Senator Dolliver was supported by Mr. Charles R. Davis of Minnesota in the same year. In 1911 Mr. William B. McKinley of Illinois proposed an increase in the annual appropriations to land grant colleges and for the demonstration of practical and scientific methods of agriculture. Mr. Asbury F. Lever of South Carolina in the same year introduced his bill for the establishment of agricultural extension departments in connection with the agricultural colleges and experiment stations in the several states receiving the benefit of an act of Congress approved March 2, 1887, a bill which was passed after repeated efforts in 1914. Senator Dolliver's advocacy of federal grants for agriculture and vocational secondary schools was assumed in 1911 by Senator Carroll S. Page of Vermont and persistently continued, only to be taken up in 1915 by Senator Hoke Smith of Georgia. Senator L. S. Overman of North Carolina in 1911 sponsored a bill for the "support and maintenance of farm life and rural high schools."

Of these proposals the Lever bill alone has succeeded in securing enactment. This measure, passed in 1914, provides for federal aid to state agricultural colleges for co-operative agricultural extension work in coöperation with the Department of Agriculture. The work is to be given to persons not attending or resident in agricultural colleges by means of farmers' institutes, lecture courses, movable schools, correspondence courses, and other methods. The appropriations from federal sources began with



\$480,000, or \$10,000 for each state. This sum is to be raised by annual increments until a total of \$4,100,000 annual appropriation is reached, to be divided by the Secretary of Agriculture among the states in the proportion that their rural populations bear to the rural population of the whole country. Each state is required to raise an amount equal to the appropriation from the federal treasury. The important point in such legislation is not the advisability or need of the measure in itself, but the danger that may come by an extension of the precedent of federal aid. With regard to this measure in particular, however, it may be of interest to quote the statement of one of the leaders in the field of scientific agriculture. In a report<sup>1</sup> on the Relations between the Federal Department of Agriculture and the Agricultural Colleges and Experiment Stations Professor E. Davenport said: "I am convinced that most of the irritation and difficulty and most of the absurd 'coöperation' have arisen from the department's undertaking to solve local problems entirely outside its proper field of activity, often to the embarrassment of the stations, and with no other excuse than that it had the money and the inclination to do it, and that it is easier to secure funds by indirect than by direct taxation. He was of the opinion that the sphere of the national department should be "national, international, or at least interstate in operation," while "to the state institutions belong the study of local questions."

To the student of the history of the federal grants for agricultural education the striking feature in the recent movement is the strong resemblance of the appeals now made for federal appropriations to those made by Senator Morrill. The advocate of federal grants bases his plea on the dignity of labor, the ignorance of the farmer of scientific methods, the low productivity of the soil, a comparison of the products per acre in this country with those of the European countries, and, finally, the possibility of reducing the high cost of living thru intelligent farming. He may refer also to the disastrous drift of population from the country to the city. On the educational side he may mention that "we have drifted away from practical education and have gotten largely into theoretical and what is called intellectual education," but that training along industrial lines can be made to contribute to cultural education. These were the reasons put forward by Senator Morrill; they are the reasons of his modern successors. There is, indeed, an implied confession of failure of the agricultural colleges. These institutions train only a small percentage of the agricultural population, and then turn out only scientific experts. But, while they are doing valuable work, "we have this expenditure of money, wisely expended, and this vast amount of information, continually accumulating, that is not bringing back the returns which it should. It is not bringing back the returns to the farmer and to the Nation, because it is not used."<sup>2</sup> Since the farmer does not come to the college, and presumably because the extension work already employed by the colleges was ineffectual, the bill sends the teachers to the farmers.

<sup>1</sup> Association of American Agricultural Colleges and Experiment Stations, *Proceedings 27th Annual Convention*, 1913, pages 121-133 (Montpelier, Vermont, 1914).

<sup>2</sup> Senator Hoke Smith, speaking in the Senate in 1914 on the Lever bill.

The adequacy of this measure for the regeneration of the farmer and the improvement of agriculture did not commend itself to all the members of Congress. The chief opposition came, for example, from Senator Carroll S. Page, who felt that the measure did not go far enough. This opposition opened up a new campaign for federal grants in aid not only of agriculture but of domestic science, vocational education, and the preparation of teachers of these subjects. Hitherto federal aid had been limited to institutions of college rank; the new movement contemplated an extension of the principle to secondary schools. The fears of those who were originally opposed to the principle of federal grants not merely on the theory of states rights but because of the danger of establishing a precedent are now realized.

In 1914 a Federal Commission on National Aid to Vocational Education was appointed to discuss in general the advisability of such legislation as was being pressed by Senator Page and Senator Hoke Smith. The commission consisted of nine members, and included only two members who were definitely associated with education in its special relation to vocational preparation. A lengthy report was published recommending the application of federal grants to the purposes proposed. The following were the reasons urged in favor of federal grants:

- (1) There is pressing need of vocational education.
- (2) The problem of vocational education is too extensive to be worked out except by a national agency.
- (3) The states are too poor to attempt a solution of the problem.
- (4) Federal grants would start an interest and stimulate local effort in the direction of vocational education.
- (5) Federal grants in this case are constitutional on the basis of promoting general welfare.
- (6) The mobility of the population and of labor in particular justifies the application of federal resources to the problem.
- (7) The training of teachers of vocational subjects is expensive and teachers are migratory; both reasons justify federal aid for their training.
- (8) A bureau should be maintained by federal appropriation to assemble and distribute information on vocational subjects.

The fruit of this commission can best be indicated by a consideration of the Smith-Hughes Act, which after several years of discussion in Congress became a law on February 23, 1917. This bill was introduced in the Senate by Senator Hoke Smith of Georgia, and in the House of Representatives by Mr. Dudley M. Hughes of Georgia, and is intended "to provide for the promotion of vocational education; to provide for coöperation with the states in the promotion of such education in agriculture, and the trades and industries; to provide for coöperation with the states in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure." The act provides



- (1) For the payment of the salaries of teachers, supervisors, and directors of agricultural subjects. The expenditure on this item begins with an appropriation of \$500,000 in 1918 and rises to \$3,000,000 in 1926 and for each year thereafter.
- (2) For the payment of the salaries of teachers of trade and industrial subjects. The appropriations are to the same amounts as under the first provision.
- (3) For the payment, in coöperation with the states, of the cost of preparing teachers, supervisors, and directors of agricultural subjects and teachers of trade and industrial subjects. The appropriation begins with \$500,000 in 1918 and rises to \$1,000,000 in 1921.

The act establishes a Federal Board for Vocational Education consisting of the Secretaries of Agriculture, Commerce, and Labor, the United States Commissioner of Education, and three citizens, appointed by the President to represent respectively manufacturing and commercial interests, agriculture, and labor. The board is to coöperate with the states in promoting the purposes of the bill, and to have studies made on vocational work in agriculture, trades and commerce, and home economics, each subject in coöperation with the particular department concerned. The Commissioner of Education is authorized to make recommendations relative to the administration of the act, and to promote investigations concerning the administration of vocational schools, courses of study, and instruction in vocational subjects. The members of the board other than the members of the Cabinet and the Commissioner of Education are to receive an annual salary of \$5000. For purposes of administering the act and conducting studies and investigations \$200,000 a year is placed at the disposal of the board. The states are required to signify their acceptance of the conditions of the act thru legislative action, and to appoint a board of three or more members to coöperate with the federal board, which will approve the plans of the states for carrying out the purposes of the act and receive annually and publish financial statements and reports on the work accomplished. The board in each state may be either the state board of education, or any state board having charge of the administration of public education, or any state board having charge of the administration of any kind of vocational education in the state.

It is essential that such a revolutionary measure be considered from all angles. The one large experiment in the provision of federal support for education, the Morrill and supplementary acts, failed for nearly forty years, and the failure was due to the absence of an educational policy. Only when the states really took up the objects, and only when a general social demand arose, was success possible. However sound the theoretical arguments for vocational education may be, all the arguments adduced by the Vocational Education Commission or the supporters of the federal aid bills in behalf of federal aid could be applied with equal weight to any other department of education or social activity. The need of education, the extensiveness of the problem, the mobility of population, the need of trained teachers, and the need of a central information bureau are all reasons that could be applied equally in support of any other

kind of claim on the federal treasury. Of much greater importance than the unsoundness of these claims is the absence of an educational policy underlying this type of legislation. There has been sufficient piecemeal tinkering with educational problems. Federal interference together with an attempt to patch up a small part of the whole simply perpetuates a system that is failing because there is no sound, unifying principle to vitalize the whole body of educational practice. The problem of vocational education cannot be treated in isolation; if it has any place at all, it must be made a part of the general organization. The experts have not yet arrived at any unanimity on the subject of vocational education. In fact, while the experts in general and vocational education have been discovering the very grave difficulties underlying the problem and are less able to present a policy now than they were five years ago, the federal legislators are still discussing the merits of a measure framed, in outline at least, in 1911, and going back in principle to the act of 1862. During this period a new problem has come prominently to the front involving a drastic change in the conceptions and administration of the education of adolescents. Educational surveys are only just beginning to apply real tests to present systems and to formulate the results. The Cleveland survey, for example, in emphasizing the one fact of the vocational uselessness of the age period from fourteen to sixteen, has dealt a severe blow to prevailing conceptions on the organization of vocational education. Indeed, there is no single phase of the educational problem that needs so much consideration as this, which the legislator desires to settle in this offhand way.

The act itself presumes to settle a question that is far from being settled: it divides up the educational process; it would probably sanction the establishment of dual boards for educational control, with a federal board as a third authority supervising these; it fails to set up a successful machinery to supervise the expenditure of funds, since the members of the proposed federal board could devote only a fraction of their time and interest to the subject; it would create in each state conflicting interests between institutions, and set up agents with divided allegiance. The act attempts to legislate for the country as a whole. But the situation with regard to agriculture and trades and industries varies so widely in the separate states that each state has a problem of its own, and legislation which might be good for one state might be wholly unsuited to another. It is true that the act permits each state board to draw up its own plan, subject to the approval of the federal board. Such a provision might serve some purpose if all the states had reached the same educational standards, but they have not. Before any money is appropriated for industrial education by Congress, there should be a thoroughgoing study of present conditions to show the present situation and present needs. To legislate without a more thorough consideration of the whole subject than the examination by an *ex parte* commission of *ex parte* witnesses is to legislate in the dark. But even such an investigation could prove only the need or otherwise of vocational education, not the advisability of federal aid. The only bill that Congress could wisely pass at the present time, if it has a genuine desire to pro-



mote educational progress, would be a bill authorizing the appropriation of a sum of money to be placed at the disposal of the Commissioner of Education for the purposes of conducting educational enquiries and collecting and distributing information. This can be done effectually by endowing the educational authority with a position of dignity and influence. What the country needs at the present moment in education is the guidance of the expert. Educational progress, especially in a country of such varied conditions as the United States, can be advanced only by experimental solutions demanded by these conditions; diversity rather than uniformity is a greater guarantee for the future. The development of the land grant colleges indicates that state generosity is not stimulated merely by a federal bounty. There are other and more pressing questions relating to the general system of education that demand attention; to these the states are addressing themselves. Vocational education will be taken up by the states as soon as educators and others can come forward with a policy.

In comparison with other countries the United States has been slow to deal with many questions of fundamental social and economic importance. One reason for this, and it cannot be overlooked, lies in the nature of its government. Such questions belong exclusively within the sphere of the states and can be carried into effect only by state action. But since political attention is concentrated upon the federal government and its action, there is a tendency to neglect the important problems lying within the sphere of state control and responsibility. Education is one of these problems, which the states control absolutely and the federal government can affect only indirectly by a system of bounties. Educational reformers, instead of bringing pressure to bear upon the primary authority, the state, endeavor to accomplish their object thru the indirect action of the federal government. And the politician is apparently ready at any time to do "something" for anybody for political reasons, irrespective of educational policy.

### LAND GRANT COLLEGES AND STUDENTS OF AGRICULTURE

THE charge was frequently made by the opponents of the grants to the agricultural and mechanic arts colleges that these institutions were not training agriculturists, but were attempting to give the training of the ordinary college course. Investigations and statistical reports for the first twenty or twenty-five years following the passage of the Morrill Act seem to bear out this charge. The following table, drawn up as a result of a questionnaire issued by the Committee on Education and Labor, appointed "to inquire into the condition and management of the agricultural and other colleges which have received grants from the United States under the act of July 2, 1862," gives some indication of the situation in 1872-73.<sup>1</sup>

<sup>1</sup> 43d Congress, 2d Session, House Reports No. 57.

1872-73	Date of opening	Whole number of graduates in branches relating to			Total <sup>1</sup>
		Agriculture	Mechanic Arts	Science and Classics	
Agricultural and Mechanical College of Alabama	1872	—	1	8	9
Arkansas Industrial University	1872	—	—	—	0
University of California	1869	—	—	22	22
Delaware College	1834	—	—	3	3
Georgia State College of Agriculture and the Mechanic Arts	1872	—	2	—	2
Illinois Industrial University	1868	21	11	12	44
Iowa State Agricultural College and Farm	1868	25	9	7	41
Agricultural and Mechanical College of Kentucky	1866	115	84	100	299
Louisiana State Agricultural and Mechanical College	1860	—	—	—	0
Maine State College of Agriculture and the Mechanic Arts	1868	—	—	—	13
Maryland Agricultural College	1859	8	—	—	8
Massachusetts Agricultural College	1867	64	—	—	64
Massachusetts Institute of Technology	1865	—	—	—	74
Michigan State Agricultural College	1857	—	—	—	0
University of Minnesota	1868	2	—	—	2
University of the State of Missouri Agricultural and Mechanical College	1841	—	—	—	0
School of Mines and Metallurgy	1871	—	—	—	0
University of Nebraska	1871	—	—	—	2
New Hampshire College of Agriculture and the Mechanic Arts	1867	5	3	—	8
Rutgers Scientific School of Rutgers College	1864	7	47	150	204
Cornell University	1863	112	45	78	235
Ohio Agricultural and Mechanical College	1870	—	—	—	0
Corvallis College, Oregon	1870	—	—	—	0
Pennsylvania State College	1859	—	—	—	41
Tennessee Agricultural College	1794	4	—	11	15
Agricultural and Mechanical College of Texas	1876	—	—	—	0
University of Vermont State Agricultural College	1800	—	21	53	74
Virginia Agricultural and Mechanical College	1872	—	—	—	0
Hampton Normal and Agricultural Institute	1868	44	17	—	61
West Virginia University	1868	20	—	—	20
University of Wisconsin	1849	—	3	147	150
Totals		427	243	591	1391

<sup>1</sup> This column includes graduates in other subjects than those referred to in the table; the number graduating in the subjects mentioned was 1261.



It will be noticed in this table that the total number of graduates in agriculture forms only about one-third of the total in the fields of agriculture, mechanic arts, and science and classics (427 out of a total of 1261). In his introduction to the Report for 1873-74 (page lxxiv) the Commissioner of Education writes: "The colleges have been sometimes criticised on the ground that their graduates in agricultural science have been comparatively few, or rather that few of their graduates have become practical farmers. If the colleges made no provision or insufficient provision for instruction in this department, there might be some justification for this criticism. It is believed, however, that all the colleges have provided for special instruction in agricultural science and that the graduates therein bear a fair proportion to those in other specialties. Still, it is not quite logical to blame the colleges for the choice of professions or callings of their graduates. No one would think of reproaching the classical colleges, because they do not make all their graduates lawyers, or doctors, or clergymen." The analogy between the agricultural and mechanic arts colleges and the classical colleges is specious, since the latter lay no claim to being professional schools. The Commissioner appears to have forgotten the general purpose of the establishment of these institutions.

In 1883, ten years later, President Atherton of Pennsylvania State College, in referring to the fact that the number of students studying agriculture was small, stated that "So far as the almost uniform experience of this country goes, the marked demand for highly educated scientific men is not so great in agriculture as in many other employments . . . but the present state of our industries is such that a young man whose only capital is a good education finds that he can use it with greater certainty of immediate returns in other pursuits than in farming." The Commissioner of Education corroborated this statement in the following year when he wrote that "The instruction which these schools [of science] offer is at present too theoretical and follows too closely the model of the classical college. So far as science is concerned, the great difficulty is the want of material equipment. The training in agriculture and the mechanic arts languishes from various causes. Competent men are not easily found to organize and conduct these departments, and in many states the rural population have little faith in the utility of training, especially the agricultural training: so that the provision which the colleges are able to make for this branch is not properly appreciated. When state aid is withdrawn from an agricultural college on the plea that such colleges are not required, as has been done in one instance, and when the labor of ordinary farm hands is prized above that of the graduates from agricultural schools, men have small inducement to pursue the course of training. It rests chiefly with the schools themselves to remove these hindrances to their successful operation, but this can only be accomplished by gradual advances. In several of the Northwestern States, agricultural colleges and departments have passed the time of their severest trial and have gained an assured position among the agencies that are deemed essential to the development of the local resources. In every case it will be

found that the colleges have had to create the sentiment that now operates for their support and progress."

According to this report the lack of progress of the agricultural college is charged to the lack of confidence on the part of the public in the graduates of these colleges. More might perhaps have been made of the statement that the instruction was too theoretical and followed too closely the model of the classical college. In the report for 1890-91 the Commissioner of Education again raises this point and confirms a view which was becoming somewhat widespread, that the agricultural and mechanical colleges were reaching out somewhat farther than the law allowed. "It is stated," according to the report, "that the 'leading object' of these institutions shall be to teach such branches of learning as are related to agriculture and the mechanic arts; but even the most cursory examination of the colleges thus aided will show that in a large majority of cases these branches have not been made the 'leading objects,' although of late years they have been more and more demanding greater recognition, as at least coördinate departments of the several institutions." Again in 1893-94, the Commissioner of Education refers to the requirement of the law of August 30, 1890, that the appropriation must "be applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life and to the facilities for such instruction. Notwithstanding the plain language above quoted, this Bureau has been compelled during the year to order the refunding of sums of money paid out of what is properly known as the 'Morrill Fund' for the salaries of treasurer, secretary, and professors of ancient and modern languages."

In point of fact, it was not until the last decade of the nineteenth century that the colleges of agriculture had anything to offer in the way of scientific training, and at the same time agricultural pursuits and the allied occupations began to hold out some attractions to the graduates of such colleges. Since that period, of course, the colleges have made themselves felt in the development of agricultural interests. A statistical presentation of the number of students enrolled in agricultural subjects and those studying the different branches of mechanic arts should offer convincing testimony that the development of the agricultural side of the land grant college is but a matter of the last few years.



## FEDERAL AID FOR VOCATIONAL EDUCATION

DISTRIBUTION OF STUDENTS IN LAND GRANT COLLEGES, 1894-1914<sup>1</sup>

Year	Agriculture <sup>2</sup>	Mechanic Arts (Engineering)
1894-95	2,712	5,053
1895-96	2,881	6,093
1896-97	3,053	5,851
1897-98	3,190	6,059
1898-99	4,390	6,730
1899-1900	5,035	8,341
1900-01	5,625	9,605
1901-02	Not given	Not given
1903	2,471	10,535
1904	2,331	12,236
1905	2,473	13,000
1906	2,963	13,937
1907	3,930	15,896
1908	4,566	17,411
1909	5,873	17,435
1910	7,241	17,259
1911	8,859	16,301
1912	10,691	14,847
1913	12,462	15,141
1914	14,844	16,235

The same facts may be illustrated in another way by a presentation of the percentage of total expenditure of the land grant colleges devoted to agriculture and mechanic arts respectively.

PERCENTAGE OF TOTAL DISTRIBUTION OF EXPENDITURES OF LAND GRANT COLLEGES<sup>3</sup>

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Agriculture	16.1	16.8	16.8	17.6	17.7	19.3	21.2	20.1	22.5	22.0	23.3	23.7	23.1
Mechanic Arts	27.9	29.5	29.6	30.5	30.9	27.8	26.9	27.9	26.7	26.3	26.3	27.7	28.7
English Language	12.3	12.3	12.4	11.7	10.9	10.7	10.1	10.0	10.1	8.9	9.4	8.6	8.8
Mathematical Science	12.9	11.8	11.8	11.6	11.6	11.0	10.7	9.4	9.3	10.0	9.1	8.5	8.3
Natural and Physical Science	24.7	23.4	23.2	22.7	23.2	24.9	23.2	23.8	23.7	26.5	24.6	23.6	22.6
Economic Science	6.1	6.2	6.2	5.9	5.7	5.6	5.7	5.5	5.9	5.4	6.2	6.7	7.2
Training of Teachers of Elementary Agriculture and Mechanic Arts						0.7	2.2	3.3	1.8	0.9	1.1	1.2	1.3

Viewed from another point there is equally strong evidence that educational progress cannot be forced in advance of social needs. The land grant college, as has been shown above, made but a slight appeal to students and public before the close of the nineteenth century. It was only when the social demand for trained agriculturists and engineers appeared, and the colleges developed suitably organized curricula to meet

<sup>1</sup> Based on Reports of the United States Commissioner of Education.

<sup>2</sup> Including short course students and students in colored institutions (1894-1902).

<sup>3</sup> Based on Reports of the United States Commissioner of Education.

these demands, that the state made adequate appropriations to place the colleges on a satisfactory financial basis. Since 1892 the income from the federal grants has never been higher than one-third of the total income of the land grant colleges; this proportion has gradually been reduced until in 1915 this source furnished only a little more than eleven per cent of the whole income. Financially the success of these institutions has been due to local interest.

INCOME OF LAND GRANT COLLEGES ACCORDING TO SOURCES <sup>1</sup>

Year	Total Income	From Federal Sources	From other Sources	Percentage of Federal Sources to Total	Percentage of other Sources to Total
1892	\$4,033,833	\$1,340,998	\$2,692,835	33.24	66.76
1893	4,636,017	1,534,657	3,101,360	33.08	66.92
1894	5,338,769	1,540,055	3,798,714	28.84	71.16
1895	4,179,662	1,397,019	2,782,643	33.42	66.58
1896	5,419,896	1,568,205	3,851,691	28.93	71.07
1897	5,363,440	1,674,441	3,688,999	31.03	68.97
1898	5,999,916	1,721,151	4,278,765	28.68	71.32
1899	6,193,016	1,769,716	4,423,300	28.57	71.43
1900	6,969,249	1,801,677	5,167,572	25.85	74.15
1901	7,335,604	1,937,136	5,398,468	26.47	73.53
1902	9,166,999	2,000,000	7,166,999	21.81	78.19
1903	9,645,951	2,108,470	7,537,481	21.86	78.14
1904	10,886,550	2,045,963	8,840,587	18.79	81.21
1905	11,659,955	2,055,083	9,604,872	17.62	82.28
1906	13,615,158	2,098,151	11,517,007	15.41	84.59
1907	14,492,884	2,105,915	12,386,969	14.51	85.49
1908	18,276,597	2,378,060	15,898,537	13.01	86.99
1909	18,595,883	2,675,066	15,920,817	14.38	85.62
1910	20,940,610	2,998,281	17,942,329	14.31	85.69
1911	20,579,559	3,268,811	17,310,748	15.88	84.12
1912	24,817,988	3,529,751	21,288,237	14.22	85.78
1913	24,962,139	3,535,625	21,426,514	14.16	85.84
1914	34,891,224	3,592,198	31,299,026	10.26	89.74
1915	31,961,765	3,552,077	28,409,688	11.19	88.81

The table on pages 104 and 105 gives the distribution of the federal grants under the provisions of all the acts affecting agricultural education in force in 1914. The presentation indicates the ultimate destination of the funds to each institution in each state.

It is significant that the land grant colleges, undoubtedly intended by Senator Morrill and his supporters for the function primarily of scientific preparation for agricultural pursuits, are only just now, more than fifty years after their foundation, beginning to fulfil the function for which they were established. It is difficult to say whether the foundation of the college was an intelligent anticipation of future needs, or whether the colleges at the close of the last century stimulated an interest in the

<sup>1</sup> Not including income for purposes of experimental stations and extension work.



# FEDERAL AID TO THE COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS AND AGRICULTURAL EXPERIMENT STATIONS IN THE UNITED STATES <sup>1</sup>

State or Territory	Name of Institution, and Location	Land Grant of 1862 (First Morrill Act)	Act of 1890 (Second Morrill Act)	Act of 1907 (Nelson Act)	Act of 1887 (Hatch Act)	Act of 1906 (Adams Act)	Act of 1914 (Smith-Lever Act) <sup>2</sup>	Total to each Institution	Total to each State
ALABAMA.....	Alabama Polytechnic Institute, Auburn.....	\$20,280	\$13,750	\$13,750	.....	.....	\$31,493	\$79,273	.....
	Agricultural and Mechanical College for Negroes, Normal Experiment Station, Auburn.....	.....	11,250	11,250	\$15,000	\$15,000	.....	22,500	\$131,773
ARIZONA.....	University of Arizona, Tucson.....	.....	25,000	25,000	.....	.....	11,717	30,000	61,717
ARKANSAS.....	Experiment Station, Tucson.....	.....	.....	.....	15,000	15,000	26,980	30,000	91,717
	University of Arkansas, Fayetteville.....	4,200	18,192	18,192	.....	.....	.....	67,244	.....
	Branch Normal College (colored), Pine Bluff.....	.....	6,818	6,818	.....	.....	.....	13,636	.....
CALIFORNIA.....	Experiment Station, Fayetteville.....	.....	.....	.....	15,000	15,000	.....	30,000	110,880
	University of California, Berkeley.....	41,811	25,000	25,000	.....	.....	21,039	112,850	.....
	Experiment Station, Berkeley.....	.....	.....	.....	15,000	15,000	.....	30,000	142,850
COLORADO.....	The State Agricultural College of Colorado, Fort Collins.....	15,450	25,000	25,000	.....	.....	14,795	80,245	110,245
CONNECTICUT.....	Experiment Station, Fort Collins.....	6,750	.....	.....	15,000	15,000	.....	30,000	.....
	Connecticut Agricultural College, Storrs.....	.....	25,000	25,000	.....	.....	.....	30,000	.....
	Experiment Station (State), New Haven.....	.....	.....	.....	7,500	7,500	11,598	15,000	98,148
DELAWARE.....	Experiment Station (College), Storrs.....	4,980	20,000	20,000	.....	.....	11,281	15,000	.....
	State College for Negroes, Dover.....	.....	5,000	5,000	.....	.....	.....	10,000	.....
FLORIDA.....	Experiment Station, Newark.....	.....	.....	.....	15,000	15,000	.....	30,000	96,261
	University of Florida, Gainesville.....	7,830	12,500	12,500	.....	.....	16,491	49,321	.....
	Florida Agricultural and Mechanical College for Negroes, Tallahassee.....	.....	.....	.....	.....	.....	.....	25,000	104,321
GEORGIA.....	Experiment Station, Gainesville.....	.....	12,500	12,500	15,000	15,000	.....	30,000	.....
	Georgia State College of Agriculture, Athens.....	14,954	16,666.50	16,666.50	.....	.....	35,174	83,461	.....
	Experiment Station, Experiment.....	.....	.....	.....	15,000	15,000	.....	30,000	130,128
HAWAII.....	Georgia State Industrial College (colored), Savannah.....	.....	8,333.50	8,333.00	.....	.....	.....	16,667	50,000
IDAHO.....	College of Hawaii, Honolulu.....	.....	25,000	25,000	.....	.....	13,110	91,284	121,284
ILLINOIS.....	University of Idaho, Moscow.....	28,174	25,000	25,000	.....	.....	.....	30,000	.....
	Experiment Station, Moscow.....	.....	.....	.....	15,000	15,000	36,282	118,744	148,744
	University of Illinois, Urbana.....	32,462	25,000	25,000	.....	.....	28,943	30,000	125,943
INDIANA.....	Experiment Station, Urbana.....	17,000	25,000	25,000	.....	.....	.....	30,000	144,228
	Purdue University, La Fayette.....	.....	.....	.....	15,000	15,000	24,556	100,884	130,884
IOWA.....	Experiment Station, La Fayette.....	.....	.....	.....	15,000	15,000	31,088	82,483	.....
	Iowa State College of Agriculture and Mechanic Arts, Ames.....	35,434	25,000	25,000	.....	.....	24,094	62,108	120,889
KANSAS.....	Experiment Station, Ames.....	.....	.....	.....	15,000	15,000	.....	30,000	.....
	Kansas State Agricultural College, Manhattan.....	26,328	25,000	25,000	.....	.....	.....	30,000	113,210
KENTUCKY.....	Experiment Station, Manhattan.....	.....	.....	.....	15,000	15,000	.....	30,000	100,304
	State University, Lexington.....	8,645	21,375	21,375	.....	.....	17,748	63,545	.....
	Kentucky Normal and Industrial Institute for Colored People, Louisville.....	1,255	3,625	3,625	.....	.....	.....	8,505	103,545
LOUISIANA.....	Experiment Station, Lexington.....	.....	.....	.....	15,000	15,000	.....	30,000	103,545
	Louisiana State University and Agricultural and Mechanical College, Baton Rouge.....	9,116	14,449	14,449	.....	.....	21,102	30,000	113,210
	Southern University and Agricultural and Mechanical College (colored), Scotland Heights, Baton Rouge.....	.....	10,551	10,551	.....	.....	14,389	70,304	100,304
MAINE.....	Experiment Station, Baton Rouge.....	.....	.....	.....	15,000	15,000	.....	30,000	.....
	University of Maine, Orono.....	5,915	25,000	25,000	.....	.....	.....	30,000	103,872
MARYLAND.....	Experiment Station, Orono.....	5,797	20,000	20,000	.....	.....	.....	30,000	178,387
	Maryland State College of Agriculture, College Park.....	.....	5,000	5,000	.....	.....	25,002	148,387	.....
	Princess Anne Academy, Eastern, Branch of the Maryland State College of Agriculture (colored), Princess Anne Experiment Station, College Park.....	7,300	16,666.50	16,666.50	.....	.....	24,899	97,157	127,157
MASSACHUSETTS.....	Massachusetts Agricultural College, Amherst.....	3,650	8,333.50	8,333.50	.....	.....	.....	30,000	.....
	Massachusetts Institute of Technology, Boston.....	.....	.....	.....	15,000	15,000	.....	30,000	103,545
	Experiment Station, Amherst.....	70,385	25,000	25,000	.....	.....	.....	30,000	103,545
MICHIGAN.....	Michigan Agricultural College, East Lansing.....	22,258	25,000	25,000	.....	.....	.....	30,000	103,545
MINNESOTA.....	Experiment Station, East Lansing.....	.....	.....	.....	15,000	15,000	.....	30,000	103,545
	University of Minnesota, University Farm, St. Paul.....	.....	.....	.....	15,000	15,000	.....	30,000	103,545
MISSISSIPPI.....	Experiment Station, St. Anthony Park, St. Paul.....	.....	.....	.....	15,000	15,000	.....	30,000	103,545
	Mississippi Agricultural and Mechanical College, Agricultural College.....	5,915	12,378	12,378	.....	.....	29,330	60,001	.....
	Alcorn Agricultural and Mechanical College (colored), Alcorn.....	6,814	12,622	12,622	.....	.....	.....	30,000	122,059
MISSOURI.....	Experiment Station, Agricultural College.....	17,994	23,437.50	23,437.50	.....	.....	33,036	97,905	.....
	University of Missouri, Columbia.....	.....	1,562.50	1,562.50	.....	.....	.....	3,125	131,030
MONTANA.....	Lincoln Institute (colored), Jefferson City.....	.....	.....	.....	15,000	15,000	.....	30,000	.....
	Experiment Station, Columbia.....	.....	.....	.....	.....	.....	.....	30,000	98,204
	Montana State College of Agriculture and Mechanic Arts, Bozeman.....	35,312	25,000	25,000	.....	.....	12,952	98,204	128,264
	Experiment Station, Bozeman.....	.....	.....	.....	15,000	15,000	.....	30,000	.....



State	29,082	25,000	25,000	25,000	15,000	15,000	20,728	99,810
University of Nebraska, Lincoln.....		25,000	25,000	25,000	15,000	15,000		129,810
Experiment Station, Lincoln.....		25,000	25,000	25,000	15,000	15,000		30,000
University of Nevada, Reno.....	4,263	25,000	25,000	25,000	15,000	15,000	10,934	65,097
Experiment Station, Reno.....		25,000	25,000	25,000	15,000	15,000		30,000
New Hampshire College of Agriculture and Mechanic Arts, Durham.....	4,800	25,000	25,000	25,000	15,000	15,000	13,133	66,933
Experiment Station, Durham.....		25,000	25,000	25,000	15,000	15,000		30,000
New Jersey.....		25,000	25,000	25,000	15,000	15,000		73,480
Experiment Station, New Brunswick.....	5,800	25,000	25,000	25,000	15,000	15,000	17,660	30,000
New Mexico.....		25,000	25,000	25,000	15,000	15,000		103,460
State College, New Mexico College of Agriculture and Mechanic Arts.....		25,000	25,000	25,000	15,000	15,000		63,414
Experiment Station, Agricultural College.....		25,000	25,000	25,000	15,000	15,000	13,414	30,000
Cornell University, Ithaca.....	34,429	25,000	25,000	25,000	15,000	15,000	33,443	93,414
Experiment Station (State), Geneva.....		25,000	25,000	25,000	15,000	15,000		117,872
Experiment Station (Cornell), Ithaca.....		25,000	25,000	25,000	15,000	15,000		3,000
The North Carolina College of Agriculture and Mechanic Arts, West Raleigh.....	7,500	16,750	16,750	16,750	13,500	13,500	32,953	27,000
The Negro Agricultural and Technical College, Greensboro		8,250	8,250	8,250				73,953
Experiment Station, West Raleigh.....		25,000	25,000	25,000	15,000	15,000		16,500
North Dakota.....	59,831	25,000	25,000	25,000	15,000	15,000	16,236	120,453
North Dakota Agricultural College, Agricultural College.....		25,000	25,000	25,000	15,000	15,000		30,000
Experiment Station, Agricultural College.....		25,000	25,000	25,000	15,000	15,000	35,557	156,067
Ohio.....	31,451	25,000	25,000	25,000	15,000	15,000		117,008
Ohio State University, Columbus.....		22,500	22,500	22,500	15,000	15,000	26,256	147,008
Experiment Station, Wooster.....		2,500	2,500	2,500	15,000	15,000		30,000
Oklahoma.....		25,000	25,000	25,000	15,000	15,000		71,256
Oklahoma Agricultural and Mechanical College, Stillwater		25,000	25,000	25,000	15,000	15,000		5,000
Agricultural and Normal University (colored), Langston.....		25,000	25,000	25,000	15,000	15,000		30,000
Experiment Station, Stillwater.....		25,000	25,000	25,000	15,000	15,000		106,256
Oregon.....	11,267	25,000	25,000	25,000	15,000	15,000	14,442	75,709
Oregon State Agricultural College, Corvallis.....		25,000	25,000	25,000	15,000	15,000	46,893	106,709
Experiment Station, Corvallis.....		25,000	25,000	25,000	15,000	15,000		128,893
Pennsylvania.....	30,000	25,000	25,000	25,000	15,000	15,000		30,000
Pennsylvania State College, State College.....		25,000	25,000	25,000	15,000	15,000		50,000
Experiment Station, State College.....		25,000	25,000	25,000	15,000	15,000	10,220	92,720
Porto Rico.....	2,500	25,000	25,000	25,000	15,000	15,000		30,000
Rhode Island.....		25,000	25,000	25,000	15,000	15,000		56,445
Rhode Island College, Kingston.....		25,000	25,000	25,000	15,000	15,000		30,754
Experiment Station, Kingston.....		25,000	25,000	25,000	15,000	15,000		30,000
South Carolina.....	5,754	12,500	12,500	12,500	15,000	15,000	25,691	117,199
The Clemson Agricultural College of South Carolina, State Agricultural and Mechanical College of South Carolina (colored), Orangeburg.....		12,500	12,500	12,500	15,000	15,000		101,502
Experiment Station, Clemson College.....		25,000	25,000	25,000	15,000	15,000	16,167	30,000
South Dakota.....	35,335	25,000	25,000	25,000	15,000	15,000	31,202	93,162
South Dakota State College of Agriculture and Mechanic Arts, Brookings.....	23,960	19,000	19,000	19,000	15,000	15,000		12,000
Experiment Station, Brookings.....		6,000	6,000	6,000	15,000	15,000		30,000
Tennessee.....		6,000	6,000	6,000	15,000	15,000		89,620
University of Tennessee, Knoxville.....		18,750	18,750	18,750	15,000	15,000	45,970	12,500
Tennessee Agricultural and Industrial State Normal School (colored), Nashville.....		6,250	6,250	6,250	15,000	15,000		30,000
Experiment Station, Knoxville.....		25,000	25,000	25,000	15,000	15,000	12,438	80,039
Texas.....	6,150	25,000	25,000	25,000	15,000	15,000	12,275	110,039
Agricultural and Mechanical College of Texas, College Station.....		16,666.50	16,666.50	16,666.50	15,000	15,000		70,405
Prairie View State Normal and Industrial College (colored), Prairie View.....		8,333.50	8,333.50	8,333.50	15,000	15,000	29,267	30,000
Experiment Station, College Station.....		25,000	25,000	25,000	15,000	15,000		83,259
The Agricultural College of Utah, Logan.....	17,601	25,000	25,000	25,000	15,000	15,000		26,996
Experiment Station, Logan.....		25,000	25,000	25,000	15,000	15,000	16,523	30,000
University of Vermont, Burlington.....	8,130	25,000	25,000	25,000	15,000	15,000	22,071	94,440
Experiment Station, Burlington.....		16,666.50	16,666.50	16,666.50	15,000	15,000		114,440
The Virginia Agricultural and Mechanical College and Polytechnic Institute, Blacksburg.....	20,659	8,333.50	8,333.50	8,333.50	15,000	15,000		108,071
The Hampton Normal and Agricultural Institute (colored), Hampton.....	10,329	25,000	25,000	25,000	15,000	15,000		30,000
Experiment Station, Blacksburg.....	17,917	20,000	20,000	20,000	15,000	15,000		89,120
State College of Washington, Pullman.....	6,000	5,000	5,000	5,000	15,000	15,000	26,164	119,120
West Virginia.....		25,000	25,000	25,000	15,000	15,000	11,250	30,000
West Virginia University, Morgantown.....	12,956	25,000	25,000	25,000	15,000	15,000		70,611
West Virginia Collegiate Institute (colored), Institute Experiment Station, Morgantown.....	9,361	25,000	25,000	25,000	15,000	15,000		30,000
University of Wisconsin, Madison.....		25,000	25,000	25,000	15,000	15,000		100,611
Experiment Station, Madison.....		25,000	25,000	25,000	15,000	15,000		\$5,876,838.00
University of Wyoming, Laramie.....		25,000	25,000	25,000	15,000	15,000		\$5,876,838.00
Experiment Station, Laramie.....		25,000	25,000	25,000	15,000	15,000		\$5,876,838.00

<sup>1</sup> Prepared by the States Relations Service, United States Department of Agriculture.

<sup>2</sup> For the year ending June 30, 1916. The appropriation for 1915 was \$10,000 for each State.

<sup>3</sup> Income from all land grant funds combined.



scientific underlying principles of agriculture, or, finally, whether the social and economic conditions which then began to make agriculture profitable aroused the college to a realization of the needs of the farming population and a recognition of the possibilities of the situation. It may with truth be said that the land grant colleges are only now beginning to justify their existence and to perform their legitimate function of promoting agricultural welfare.

## CURRICULUM OF AGRICULTURAL COLLEGES

THE progress of agricultural colleges was delayed until the time when the colleges could persuade the farmer and others that their curricula possessed genuine value for practical purposes. But the colleges did not begin to demonstrate this fact adequately much before the beginning of the twentieth century. A number of causes tended to retard the development of adequate and suitable curricula. The most important was that few knew what subjects really constituted a training preparatory to agricultural occupations. Imitation of current, rule-of-thumb practices could more easily be obtained on the farm under practical conditions. The applied sciences underlying scientific farming had not yet been adequately developed to afford a satisfactory course of study, while the establishment of experiment farms and stations only began to receive national support in 1887. Another reason that checked the advance was the difficulty that lay in the way of a satisfactory interpretation of the purposes of the Morrill Act. It was impossible to decide whether the agriculture and mechanic arts colleges were to be institutions for vocational training, or chiefly to impart liberal instruction combined with some vocational work. Finally, few, if any, persons understood for some years what was meant by the "mechanic arts," whether they were to furnish the basis of separate courses parallel to agriculture, or whether they were to be included as part of the agricultural courses to afford an adequate training in such general industrial work as is essential on the farm. While Mr. Morrill's views on the subject were at no time clear, it seems highly probable, since he and other supporters of the agricultural college movement cited European practice, that the second plan was intended. Until it was discovered that the demand for engineering education in its different branches was much greater than that for agriculture, and the requirements for such education were more easily formulated, the mechanic arts formed part of the agricultural course.

In the tables on pages 110 to 115 an attempt is made to present the development of the curriculum of three agricultural colleges at approximately twenty-five year intervals. The vagueness of aim during the first thirty years following the passing of the Morrill Act is well brought out by the uncoordinated mass of subject-matter for which it would be difficult to find justification in the philosophy of education or in the practical needs of the agricultural profession. The tendency since 1890 has been toward differentiation and specialization. Much has been eliminated that was not pertinent; a better conception has been formed of the cultural needs of the agricultural specialists; and finally, the practical and scientific needs of the farmer have been well coordinated. The modern agricultural college presents not merely an array of subject-matter that was impossible before the development of the sciences on which agriculture depends, but a large number of specialized courses. Thus the Michigan Agricultural College offers courses in general agriculture, forestry, and horticulture; the University of Illinois in its College of Agriculture has five courses in general agriculture, farm



management, floriculture, landscape gardening, and agricultural education; and the Pennsylvania State College has organized nine courses in agricultural chemistry, agricultural education, agronomy, animal husbandry, botany, dairy husbandry, forestry, horticulture, and landscape gardening. These courses have not been developed and the organization is not being perfected because of federal aid, which forms but a small part of the general resources of agricultural colleges, but because there is a demand to be met. The funds of a central authority in a democracy cannot successfully be employed to inaugurate and finance new movements, least of all in education. Experimentation, analysis of social and educational conditions, and the formulation of public opinion and demands can best be promoted locally. Education, like any other activity, succeeds thru public support which in the end means also financial support. To launch a new department of education without any policy or conception of underlying aims and means for their attainment is to begin at the wrong end. So far as this country is concerned, the federal government would be of much greater service to educational progress if it gathered and distributed information, and if it could finance new experiments. As is shown elsewhere, the states will do the rest.





# PENNSYLVANIA

	FIRST YEAR			SECOND YEAR		
	1862	1890	1915	1862	1890	1915
GENERAL SCIENCES	Anatomy and physiology Physical geography Astronomy	Physiology Zoölogy Botany	Chemistry General botany	Vegetable anatomy and physiology Zoölogy Geology Paleontology General chemistry	Natural philosophy Botany	Carbon compounds Qualitative analysis Geology Mechanics and heat Plant propagation
GENERAL SUBJECTS Literature and Language	English grammar and composition Elocution	English grammar and composition	Composition Argumentation French, German, or Spanish	Rhetoric		Composition French, German, or Spanish
MATHEMATICS	Arithmetic Algebra	Arithmetic Algebra Bookkeeping	Algebra Plane trigonometry	Algebra Geometry	Algebra Geometry	
HISTORY AND SOCIAL SCIENCES	History	United States history				
OTHER SUBJECTS				Logic		
TECHNICAL SUBJECTS	Practical agriculture Farm management Horticulture		Animal husbandry Farm dairying	Veterinary science Practical agriculture Horticulture	Agricultural science Agricultural chemistry Horticulture	Farm soils Genetics Agricultural bacteriology Agricultural chemistry

STATE COLLEGE

THIRD YEAR			FOURTH YEAR		
1862	1890	1915	1862	1890	1915
Natural philosophy Chemical analysis Entomology	Chemistry Botany Mechanics Zoology	Zoology Plant breeding Entomology	Quantitative chemical analysis Engineering	Anatomy and breeding Botany Entomology	Physiological chemistry
Analytical geometry Trigonometry Calculus Surveying and leveling Navigation Drafting with instruments	Geometry Trigonometry		Analytical geometry Differential and integral calculus Drafting Mechanical drawing	Surveying	
Political and social economy		English economic history American economic history		Political economy Constitutional law	Principles of economics or labor problems Political parties
	Mental science		Moral and intellectual philosophy	Moral science	
Veterinary surgery Practical agriculture Pomology Agricultural botany	Horticulture Agricultural engineering	Cereals Soils of the United States Soil mapping Pomology Soil or crop analysis Soil fertility Hay, forage, and root crops Farm and power machinery Farm motors	Veterinary pharmacy Gardening Farm management and agricultural accounts	Feeding Veterinary science Agriculture Fertilizers Dairy farming Agricultural chemistry and analysis	Stock judging Crop production Animal nutrition Vegetable gardening Farm management Farm buildings and fences Dairy management



# MICHIGAN AGRICULTURAL

	FIRST YEAR			SECOND YEAR		
	1863	1890	1915	1863	1890	1915
GENERAL SCIENCES	Entomology Occasional lectures on chemistry	Botany	Plant anatomy and physiology Plant morphology Systematic botany Elementary chemistry Quantitative analysis Organic chemistry	Structural botany Vegetable physiology Systematic botany Physics Elementary and analytical chemistry	Botany Physics Chemistry and chemical manipulations	Plant propagation General bacteriology Physics Systematic zoology Anatomy and physiology Entomology General geology
GENERAL SUBJECTS Literature and Language		English Rhetoricals	Composition		American literature Rhetoricals	Public speaking Argumentation
MATHEMATICS	Algebra Geometry Bookkeeping Trigonometry Surveying	Algebra Geometry Drawing			Algebra Geometry Trigonometry Surveying	Surveying and leveling
HISTORY AND SOCIAL SCIENCES	History	Ancient history	Elementary economics			
OTHER SUBJECTS	Lectures on health and various topics		Lectures on health and various topics			
TECHNICAL SUBJECTS	Principles of stock-breeding Occasional lectures on care and feeding of domestic animals Manual operations on the farm	Agriculture	Types of livestock Development of agriculture Cereals Farm forestry Wood or forge shop Agricultural mathematics	Occasional lectures and manual operations as in first year Horticulture	Agriculture Landscape gardening	Fruit growing Soils Elementary dairying Forage crops

# COLLEGE

THIRD YEAR			FOURTH YEAR		
1863	1890	1915	1863	1890	1915
Animal physiology Zoölogy	Organic and analytical chemistry Physics, blowpipe analysis Anatomy Physiology Entomology Laboratory practice	Electives from: Bacteriology Botany Chemistry Civil engineering Entomology Geology Meteorology Physics Zoölogy	Astronomy Civil engineering	Botany and forestry Chemical physics Quantitative analysis Zoölogy Geology Meteorology Civil engineering Laboratory practice	Electives as in third year
English literature Rhetoric	Shakespeare Essays and speeches	Electives from: English French German		Essays and speeches English literature Milton	Electives as in third year
Industrial drawing		Drawing			Drawing
		Electives from: History Economics Political science	Political economy	United States history Political economy Finance lectures	Electives as in third year
Lectures on health and various topics	Moral philosophy		Inductive logic Mental and moral philosophy Lectures on health and various topics	Logic	
Agricultural chemistry Landscape gardening Occasional lectures and manual operations as in first year	Agriculture Horticulture	Required: Study of breeds Stock breeding Stock feeding Farm management Poultry raising Elective: Farm mechanics	Occasional lectures and manual operations as in first year	Horticulture Veterinary science	Required 20 hours from: Stock judging Animal nutrition Poultry management Poultry judging and feeding Market milk Creamery butter making Cheese making Crop improvement Grain judging Special Michigan crops and crop feeding Soil physics Soil nutrition Soil surveying Elective: Farm mechanics



## UNIVERSITY

	FIRST YEAR			SECOND YEAR		
	1867	1890	1915	1867	1890	1915
GENERAL SCIENCES	Plant culture Structure and physiology of plants Botany	Chemistry Economic entomology	Inorganic chemistry Qualitative analysis	Mechanics Chemistry Zoology Entomology Mineralogy Climate	Botany Chemistry and laboratory practice Zoology Vegetable physiology	Botany Quantitative analysis
GENERAL SUBJECTS Literature and Language	English language and composition French language and literature	British authors	Rhetoric and themes	German language and literature	German	
MATHEMATICS	Surveying Drawing	Trigonometry Drawing				
HISTORY AND SOCIAL SCIENCES						
OTHER SUBJECTS						
TECHNICAL SUBJECTS	The farm: Soils Drainage Culture of wheat, maize, grass, roots, fruit	Agriculture Horticulture Shop practice	Country life problems Farm crops Horticulture Live stock judging Dairy husbandry	The farm: Chemical elements and treatment of soils Fertilizers Fruit culture Animal husbandry Farm implements Road-making	Agricultural chemistry	Principles of breeding and feeding Farm mechanics

<sup>1</sup>The remainder of the course is made up of electives from the following: Science, 5 hours; English, 4 hours; non-agriculture subjects, 15 hours; open electives, 14 hours; agriculture, 40 hours. The requirements for graduation are 130 semester hours, of which only 52 hours are prescribed as above.

<sup>2</sup>The course in 1867 covered only 3 years.

# OF ILLINOIS

	THIRD YEAR			FOURTH YEAR		
	1867	1890	1915	1867	1890	1915
Engineering Geology Meteorology Physical geography	Animal anatomy and physiology Physics Geology	( <sup>1</sup> )	( <sup>2</sup> )	Physiography	( <sup>1</sup> )	
English literature	German	( <sup>1</sup> )			( <sup>1</sup> )	
History and civil pol- ity Rural law				History of civilization Constitutional his- tory Rural laws Rural economy Political economy Mental science		
Inductive logic						
Agricultural economy Agriculture Agricultural book- keeping Foreign agriculture History and litera- ture of agriculture Rural architecture Veterinary surgery and medicine Landscape gardening	Agricultural engi- neering and archi- tecture Animal husbandry Veterinary science Landscape gardening	( <sup>1</sup> )		History of agriculture	( <sup>1</sup> )	





## INDEX





## INDEX

- ACKERBAUSCHULEN**, Prussia, 81.
- Adams, Congressman, proposes increased appropriations for agricultural experiment stations, 63 f.
- Agassiz, 77.
- Agricultural and Mechanical College for Negroes, Normal, Alabama, 104.
- Agricultural and Mechanical College of Alabama, 99.
- Agricultural and Mechanical College of Kentucky, 99.
- Agricultural and Mechanical College of Texas, 99.
- Agricultural and Normal University (colored), Langston, Oklahoma, 105.
- Agricultural Appropriation Bill, 73.
- Agricultural Colleges and Experiment Stations, Association of. *See* Association of Agricultural Colleges and Experiment Stations.
- Agricultural colleges. *See* Land grant colleges.
- "Agricultural colleges," Senator Morrill objects to the term, 25, 28.
- Agricultural education, in England, 81.
- In Europe, 5, 79.
- In France, 80.
- In Germany, 80 f.
- In Ireland, 81 f.
- In Italy, 82.
- In Scotland, 81.
- And federal aid, 4, 9 f., 12 f., 14 f., 18, 52 f., 56 f., 59, 72, 73, 78, 93 f.
- Compared with gymnastic or military drill, 5.
- Need of, 4 f.
- Agricultural Experiment Stations, 59 ff.
- Advocated by delegates of agricultural colleges, 59.
- Appropriations for, proposals for, 59 ff.
- Bill for, approved, 63.
- Federal aid for, bills for, 59.
- History of, 59 f.
- Increased appropriations for, proposed, 63 f.
- Approved, 64.
- Relations of, with Department of Agriculture, 94.
- Senator George introduces bills for federal aid for, 59 ff.
- Student work on, 62.
- Agricultural Society, Essex County, Massachusetts, 77.
- Agriculture and Education, Department of, advocated, 76.
- Agriculture, Department of, appropriations for, v.
- Coöperation of, in extension work, 93 f.
- Relations of, with agricultural colleges and experiment stations, 94.
- Agriculture, students of, 62, 98 ff.
- Expenditure on, in land grant colleges, 102.
- Akademie des Ackerbaues, Möglin, 80.
- Alabama, Agricultural and Mechanical College of, 99.
- Alabama Experiment Station, Auburn, Alabama, 104.
- Alabama, federal grants for education to, 104.
- Alabama Polytechnic Institute, Auburn, Alabama, 104.
- Alcorn Agricultural and Mechanical College (colored), Alcorn, Mississippi, 104.
- Allison, Senator, inquires about Pacific Railroad debt, 43, 44.
- American Literary, Scientific, and Military Academy, 76.
- Amherst, Agricultural College at, 43, 99.
- Anderson, Congressman, 53, 54.
- Annales de Roville*, 80.
- Arizona Experiment Station, Tucson, Arizona, 104.
- Arizona, University of, Tucson, Arizona, 104.
- Arkansas Experiment Station, Fayetteville, Arkansas, 104.
- Arkansas, federal grants for education to, 104.
- Arkansas Industrial University, 99.
- Arkansas, University of, Fayetteville, Arkansas, 104.
- Association of Agricultural Colleges and Experiment Stations, advocates increased federal aid for education, 93.
- Opposed to extension of grants to new institutions, 48.
- Supports Morrill Bill, 37.
- Atherton, President of Pennsylvania State College, on students of agriculture, 100.
- Atwater, Professor, and experiment stations in Connecticut, 59.
- BABCOCK** tester, 64.
- Bell, Senator, supports Agricultural College Grant Bill, 12.
- Berkshire Association for the Promotion of Agriculture, 74.
- Petitions for a National Board of Agriculture, 74.
- Blair, Senator, defines scope of Morrill Bill, 35.
- Gives history and purpose of Morrill Bill, 43 f.
- Importance of agricultural colleges mentioned by, 84 f.
- On cost of maintenance of schools, 50.
- Refers to discussion on grants to negro colleges, 50.
- Reports favorably from committee on Education and Labor on Morrill Bill, 30.
- Boston Technological School, 47.
- Boussingault, 77.



Braman, Milton P., address on agricultural education by, 77.  
 Branch Normal College (colored), Pine Bluffs, Arkansas, 104.  
 Breckenridge, Congressman, 52.  
 Breckinridge, Vice-President, 9.  
 Breslau, University of, Agricultural Institute at, 81.  
 Brewer, William, Professor at Yale, and experimental stations, 59.  
 Brown, Senator, votes against Agricultural College Grant Bill, 12.  
 Buchanan, President, attacked by Senator Morrill, 15.  
     Opposed to federal aid, 72.  
     Vetoes Agricultural College Grant Bill, 13 f., 71.  
 Buckingham, Senator, supports grants to colleges, 22.  
 Burnside, Senator, introduces a bill for additional grants, 28.  
 Burton, Congressman, opposes Nelson Amendment, 58.  
 Bussey, Benjamin, bequest to Harvard College, 59 f.  
 Butler, Senator, opposes consideration of Morrill Bill, 38 f.

CALIFORNIA, and agricultural education, 76.  
     Federal grants for education to, 104.  
 California Experiment Station, Berkeley, California, 104.  
 California, University of, Berkeley, California, 99, 104.  
 Cannon, Congressman, reports from Committee on Rules, 52.  
 Carpenter, Congressman, advocates federal aid for agricultural education, 59.  
 Caruth, Congressman, opposes Morrill Bill, 53 f.  
 Chandler, Senator, 50.  
 Chapel Hill, North Carolina, experiment station at, 59.  
 Cirencester, Royal Agricultural College at, 81.  
 Classics, attacked, 20.  
     And practical education, 29.  
 Clay, Henry, and distribution of land revenues, 70, 71, 87.  
 Clay, Senator Henry, opposed to federal aid, 8, 12, 24, 72, 87.  
 Clayton, Congressman, advocates Nelson Amendment, 57.  
 Clemson Agricultural College, Clemson College, South Carolina, 105.  
 Cleveland Survey, 97.  
 Cobb, Congressman, chairman of Committee on Public Lands, opposes the Morrill Bill, 4 f., 7 f.  
 Cockrell, Senator, opposes Morrill Bill, 36, 42.  
 Coetbo, agricultural school at, 80.

Collamere, Senator, proposes amendment to Agricultural College Grant Bill, 18.  
 Colorado Experiment Station, Fort Collins, Colorado, 104.  
 Colorado, federal grants for education to, 104.  
 Colorado State Agricultural College, Fort Collins, Colorado, 104.  
 Commissioner of Education and statistics of land grant colleges, 62.  
     Control over agricultural colleges, 45, 46, 50.  
 Congressional Land Survey, 69.  
*Congressional Record*, report on Adams Bill debate, 64.  
     Report on Morrill Bill, 36.  
     Report on Nelson Amendment, 55.  
 Conkling, Senator, opposes Morrill Bill, 1872, 24.  
 Connecticut Agricultural College, Storrs, Connecticut, 104.  
 Connecticut Experiment Station, Storrs, Connecticut, 104.  
 Connecticut, federal grants for education to, 104.  
 Connecticut State Experiment Station, New Haven, Connecticut, 104.  
 Constitution, the, and public lands, 9, 10, 11, 12, 15, 18, 69, 70 ff.  
     Senator Morrill's views on, 5 f., 71.  
 Cornell Experiment Station, Ithaca, New York, 105.  
 Cornell University, Ithaca, New York, 99, 105.  
 Corvallis College, Oregon, 99.  
 Coventry, Dr., Professor of Agriculture, 81.

DALZELL, Congressman, opposes Nelson Amendment, 58.  
 Davenport, Professor E., reports on relations between Department of Agriculture and Agricultural Colleges and Experiment Stations, 94.  
 Davis, Congressman, supports increased federal aid for education, 93.  
     Supports Nelson Amendment, 57.  
 Davis, Senator Jefferson, opposed to federal aid, 11, 72, 86.  
     Sums up states rights views, 13.  
 Dawes, Senator, 44.  
 Delaware College, Newark, Delaware, 99, 104.  
 Delaware Experiment Station, Newark, Delaware, 104.  
 Delaware, federal grants for education to, 104.  
 Delaware State College for Colored Students, Dover, Delaware, 104.  
 Democratic party and federal aid to education, 8.  
 Department of Agriculture and Education, advocated, 76.  
 Department of Agriculture. *See* Agriculture, Department of.  
 Department of Science and Art, England, and Agriculture, 81.  
 Dixon, Senator, 38.

Dodge, Harvey, advocates agricultural schools, 77.

Dolliver, Senator, introduces bill for federal aid for education, 93.

Dolph, Senator, supports Morrill Bill, 45.

Dombasle, M., founder of an agricultural school, 80.

Doolittle, Senator, 18.

Dunnell, Congressman, opposed to federal aid, 72.

Opposes Morrill Bill, 52.

Economic Science, expenditure on, in land grant colleges, 102.

Edmunds, Senator, gives power to Congress over Agricultural Experiment Stations Act, 63.

Education, Senator Morrill's views on national importance of, 27 f., 31 f.

Educational character of land grant bills, discussion on, 18, 20, 27 f., 31 f.

Educational function of land grant colleges, 20.

Eldena, agricultural school at, 81.

Ellsworth, Henry L., Commissioner of Patents, proposes an agricultural depository, 74.

England, agricultural education in, 81.

English language, expenditure on, in land grant colleges, 102.

Europe, agricultural education in, 5, 79 ff.

Evarts, Senator, commends Morrill Bill, 45.

Experimental farms, notice of a bill for, 79.

Experiment Stations. *See* Agricultural Experiment Stations.

FARMERS' Alliances, 35.

*Farmer's Companion and Horticultural Gazette*, 78.

Farmers, national importance of, described by Senator Morrill, 5.

Educational opportunities for, 21.

Federal aid to education, arguments for, 4, 94, 95.

Constitution and, 69, 70 ff.

Federal Commission on National Aid to Vocational Education and, 95, 96.

For agricultural experiment stations, 59.

For agricultural high schools, 93.

History of, 69 f., 71, 73 f.

Opposition to, v, 9 ff., 12 f., 14 f., 18, 52 f., 56 f., 72, 73.

Probable effects of, 6.

Recent movements for, 93 ff.

Federal Board for Vocational Education, established under Smith-Hughes Act, 95.

Federal Commission on National Aid to Vocational Education, 94, 95.

Reasons of, for federal grants, 95.

Federal control of education opposed, 10 f., 14, 72.

Federal supervision of education, vi, 22, 56.

Federal treasury and education, v, vi.

Fessenden, Senator, 17.

Fellenberg, Philipp Emmanuel von, 73, 79 f.

Fitzgerald, Congressman, opposes increased appropriations for agricultural experiment stations, 64.

Fitzpatrick, Senator, asks for postponement of debate on Agricultural College Grant Bill, 9.

Fleischman, Charles L., and the Smithsonian Fund, 75.

Petitions Congress for agricultural schools, 74 f.

Florida Agricultural and Mechanical College for Negroes, Tallahassee, Florida, 104.

Florida and public lands, 69.

Florida Experiment Station, Gainesville, Florida, 104.

Florida, federal grants for education to, 104.

Florida, University of, Gainesville, Florida, 104.

Fox, Rev. Charles, professor of agriculture, University of Michigan, 78.

France, agricultural education in, 80.

Franklin, Benjamin, and educational reform, 73.

Frederick the Great, interest in agricultural development, 80.

Frelinghuysen, Senator, supports Morrill Bill, 1872, 92.

GALE, Senator, opposes consideration of Morrill Bill, 37.

Gardner, Congressman, opposes Nelson Amendment, 58.

George, Senator, introduces bill for federal aid for agricultural experiment stations, 60 ff.

On agricultural colleges, 36, 84.

Georgia Experiment Station, Experiment, Georgia, 104.

Georgia, federal grants for education to, 104.

Georgia State College of Agriculture, Athens, Georgia, 104.

Georgia State College of Agriculture and the Mechanic Arts, 99.

Georgia State Industrial College (colored), Savannah, Georgia, 104.

Germany, agricultural education in, 80 f.

Gibson, Senator, advocates extension of grants to technical institutions, 48.

On division of grants to negro colleges, 49.

Giessen, University of, agricultural institute at, 81.

Grignon, National Agricultural Institution at, 80.

Grignon, Royal Agricultural Institution at, 80.

Glasnevin, agricultural school at, 81.

Goode, Congressman, and additional grants for education, 29.

Gorman, Senator, protests against considering Morrill Bill, 30, 35 f.

Governors, state, required to report to Congress on public lands, 18.

Grand Jouan, agricultural school at, 80.



Grimes, Senator, 18.

Gwin, Senator, 12.

HALE, Senator, objects to amendment on Morrill Bill, 46, 47.

On division of grants to negro colleges, 49, 50.

Hall, Congressman, and bill for appropriation for agriculture, 77.

Halle, University of, agricultural institute at, 81.

Hamilton, Senator, opposed to federal aid, 23 f., 72.

Hampton Normal and Agricultural Institute (colored), Hampton, Virginia, 99, 105.

Hansborough, Senator, 56.

Harlan, Senator, reports favorably on Land Grant Bill, 17.

Supports Agricultural College Grant Bill, 11.

Urges scientific agricultural education, 18.

Harrison, President, signs Second Morrill Act, 54.

As Senator, supports federal aid for agricultural experiment stations, 60.

Harvard College, agricultural laboratory at, 59 f.

Hatch, Congressman, supports Morrill Bill, 52.

Takes charge of Agricultural Experiment Station Appropriations Bill, 63.

Hawaii, College of, Honolulu, Hawaii, 104.

Federal grants for education to, 104.

Hawley, Senator, attacks Morrill Bill, 45, 46.

Considers one aided institution in each state sufficient, 51.

Opposes federal aid for agricultural experiment stations, 60, 61.

Opposes federal control of agricultural colleges, 40 f., 72.

Proposes substitute bill, 63 f.

Hepburn, Congressman, supports Nelson Amendment, 58.

Hill, Congressman, opposes Nelson Amendment, 58.

Hitchcock, Professor, report on agricultural education in Europe, 77, 79, 81, 82.

Hoar, Senator, advocates extension of grants to new colleges, 47 f., 49.

Asks definition of "colleges," 35.

Hofwyl, Switzerland, agricultural school at, 79.

Hohenheim, agricultural school at, 81.

Höhere Lehranstalt für Landwirthschaft, Möglin, 80.

Holmes, Congressman, advocates federal aid for agricultural experiment stations, 59.

House of Representatives, change of procedure in, 51.

Howe, Senator, proposes amendment to Agricultural College Grant Bill, 18.

Hughes, Congressman, introduces bill for federal aid for vocational education, 95 f.

Hunt, Mr., proposes to distribute proceeds of public lands, 86.

Hunter, Senator, 11.

IDAHO Experiment Station, Moscow, Idaho, 104.

Federal grants for education to, 104.

Idaho, University of, Moscow, Idaho, 104.

Idstein, agricultural school at, 81. [104.]

Illinois Experiment Station, Urbana, Illinois,

Illinois, federal grants for education to, 104.

Illinois Industrial University, 99.

Illinois legislature, resolutions of, on federal aid for agricultural and industrial education, 78 f.

Illinois, University of, Urbana, Illinois, 104.

College of Agriculture of, 107, 114, 115.

Indiana, and public lands, 69.

Federal grants for education to, 104.

Indiana Experiment Station, La Fayette, Indiana, 104.

Industrial education, federal aid for, resolutions of Illinois legislature on, 78 f.

Ingalls, Senator, on division of grants to negro races, 49, 50 f.

On land grant colleges, 29, 62.

Opposes federal restrictions on agricultural experiment stations, 61.

• Supports Senator Morrill, 38.

Internal Improvement Act, 70.

Iowa Experiment Station, Ames, Iowa, 104.

Iowa, federal grants for education to, 104.

Iowa State Agricultural College and Farm, 99.

Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa, 104.

Ireland, agricultural education in, 81 f.

Italy, agricultural education in, 82.

JACKSON, President, friend of agriculture, 6 f.

Vetoes distribution of land revenues, 24, 70.

Jefferson, President, and a national university, 6, 69.

Jena, agricultural school at, 81.

Johnson, Samuel W., professor at Yale College and experimental stations, 59.

KANDEL, Dr. I. L., vi.

Kansas Experiment Station, Manhattan, Kansas, 104.

Kansas, federal grants for education to, 104.

Kansas State Agricultural College, Manhattan, Kansas, 104.

Keifer, Congressman, opposes Nelson Amendment, 58.

Kentucky, Agricultural and Mechanical College of, 99.

Kentucky Experiment Station, Lexington, Kentucky, 104.

Kentucky, federal grants for education to, 104.

Kentucky Normal and Industrial Institute (colored), Frankfort, Kentucky, 104.

Kentucky State Agricultural Society, and the Smithsonian Fund, 75.

Kentucky State University, Lexington, Kentucky, 104.

- Kerr, Congressman, objects to equal appropriations, 52.
- Kiel, University of, agricultural institute at, 81.
- Königliche Landwirthschaftliche Hochschule, Berlin, 81.
- Königsberg, University of, agricultural institute at, 81.
- Krumau, Bohemia, agricultural college at, 79.
- LAND** grant colleges, agricultural progress and, vi, 27.
- Common school teachers trained in, 27 f.
- Curriculum of, 53, 101, 107 ff.
- Educational function of, 4 f., 20, 23, 25, 31 f., 82 ff., 101, 103.
- Expenditures of, distribution of, 102.
- Farm production and, 27.
- For negro races, 46, 49 f.
- Graduates of, 20 f., 28, 33, 53, 94, 99 f.
- Military training in, 20 f., 32, 88 f.
- Relations of, with Department of Agriculture, 94.
- Reports of, to Secretary of Interior, 45, 46, 50, 54.
- Sources of income of, 103.
- Students of agriculture in, statistics of, 62, 98 ff., 102.
- Landwirthschaftschulen, Prussia, 81.
- Lane, Senator, postpones consideration of Agricultural College Grant Bill, Second Session, 37th Congress, 17, 18.
- Lanham, Congressman, refers to President Buchanan's veto, 52.
- Lavoisier, advocates agricultural institution, 80.
- Lee, Dr. Daniel, article of, in Report of Commissioner of Patents, 77.
- Leipzig, University of, agricultural institute at, 81.
- Letcher, Congressman, opposed to first Morrill Bill, 3.
- Lever, Congressman, introduces bill for establishing agricultural extension departments, 93.
- Lewis, Congressman, 54.
- Liebig, 77, 81.
- Lincoln Institute (colored), Jefferson City, Missouri, 104.
- Lincoln, President, signs First Morrill Act, 1862, 19.
- Lobbying by college presidents, 53 f.
- Loudenslager, Congressman, opposes Nelson Amendment, 58.
- Louisiana, and swamp lands, 70.
- Federal grants for education to, 104.
- Louisiana Experiment Station, Baton Rouge, Louisiana, 104.
- Louisiana Southern University and Agricultural and Mechanical College (colored), Scotland Heights, Baton Rouge, Louisiana, 104.
- Louisiana State Agricultural and Mechanical College, 99.
- Louisiana State University and Agricultural and Mechanical College, Baton Rouge, Louisiana, 104.
- Lyon, Congressman, gives notice of a bill for an agricultural college and experimental farm, 79.
- McCOMAS, Congressman, has charge of Morrill Bill in House, 52.
- McKinley, Congressman, later President, supports Morrill Bill, 52.
- McKinley, Congressman, proposes increased appropriations to land grant colleges, 93.
- Madison, President, and a national university, 69.
- Maine Experiment Station, Orono, Maine, 104.
- Maine, federal grants for education to, 104.
- Maine State College of Agriculture and the Mechanic Arts, 99.
- Maine, University of, Orono, Maine, 104.
- Mann, Congressman, opposes Nelson Amendment, 58.
- Marischal College, Aberdeen, lectureship in agricultural chemistry at, 81.
- Maryland Agricultural College, 99.
- Model farm at, 59.
- Maryland Experiment Station, College Park, Maryland, 104.
- Maryland, federal grants for education to, 104.
- Maryland State College of Agriculture, College Park, Maryland, 104.
- Mason, Senator, opposed to Morrill Bill, 8, 10, 72.
- Massachusetts Agricultural College, Amherst, Massachusetts, 49, 99, 104.
- Massachusetts Experiment Station, Amherst, Massachusetts, 104.
- Massachusetts, federal grants for education to, 104.
- Massachusetts Institute of Technology, Boston, Massachusetts, 99, 104.
- Massachusetts legislature urges national grant for an agricultural college, 78.
- Massachusetts Society for the Promotion of Agriculture, established, 73.
- Issues *Repository* and *Journal*, 73.
- Mathematical Science, expenditure on, in land grant colleges, 102.
- Maxey, Senator, proposes substitute for Morrill Bill, 1876, 28.
- Mechanic Arts, expenditure on, in land grant colleges, 102.
- Meaning of, 107.
- Students in, 102.
- Michigan Agricultural College, East Lansing, Michigan, 104.
- Michigan, agricultural education in, 5.
- And federal land grants, 69.
- Establishes an agricultural school, 79.
- Federal grants for education to, 104.



- Michigan Experiment Station, East Lansing, Michigan, 104.  
 Michigan legislature, resolution on federal aid, 77.  
 Michigan State Agricultural College, 99, 107, 112, 113.  
 Michigan State Normal School, courses in agriculture in, 77.  
 Michigan, University of, school of agriculture in, 77 f.  
 Military training in land grant colleges, 20 f., 32, 88 f.  
 Miller Institute, Virginia, status of, 35.  
 Miller, Senator, 60 f.  
 Minnesota Experiment Station, St. Anthony Park, St. Paul, Minnesota, 104.  
 Minnesota, federal grants for education to, 104.  
 Minnesota, University of, 99.  
 Minnesota, University of, University Farm, St. Paul, Minnesota, 104.  
 Mississippi Agricultural and Mechanical College, Agricultural College, Mississippi, 104.  
 Mississippi Experiment Station, Agricultural College, Mississippi, 104.  
 Mississippi, federal grants for education to, 104.  
 History of education in, 49.  
 Missouri Experiment Station, Columbia, Missouri, 104.  
 Missouri, federal grants for education to, 104.  
 Missouri, University of, Agricultural and Mechanical College of, 99.  
 Missouri, University of, Columbia, Missouri, 104.  
 Montana Experiment Station, Bozeman, Montana, 104.  
 Montana, federal grants for education to, 104.  
 Montana State College of Agriculture and Mechanic Arts, Bozeman, Montana, 104.  
 Morgan, Senator, attacks federal control of agricultural colleges, 39, 72.  
 Objects to federal restrictions on grants, 48.  
 Opposes consideration of Morrill Bill, 37 f.  
 Views on location of agricultural experiment stations, 62 f.  
 Morrill Bills  
 1857, 3-16.  
 1862, v, vi, 16-19.  
 For additional grants  
 1872, 19-27.  
 1873, 27.  
 1875, 27.  
 1876, 27.  
 1881, 29.  
 1882, 29.  
 1888, 29.  
 1890, 30-54.  
 Morrill, Senator Justin S., *passim*. (See also Morrill Bills.)  
 Attacks President Buchanan's veto, 15.  
 Attacks the classics, 20.  
 Educational views of, v, 4 f., 20, 27, 29, 31 f., 73, 75.  
 Efforts of, to increase grants to agricultural colleges, 19 ff.  
 Legislative career, 3.  
 On the function of agricultural colleges, 4 f.  
 On the tariff, 3, 32, 85.  
 Political aims of, 85.  
 Views on the Constitution and public lands, 4, 71.  
 Morton, Senator, opposes Morrill Bill, 1872, 23.  
 NAPOLEON, educational system under, 80.  
 National Agricultural Society and the Smithsonian Fund, 75.  
 National Agronomic Institution, Grignon, 80.  
 National Board of Agriculture, advocated, 1798, 74.  
 "National colleges," use of term, 20, 28.  
 National Farmers' Alliance, supports Morrill Bill, 37, 46 f.  
 National University, advocates of a, 6, 69.  
 Natural and physical science, expenditure on, in agricultural colleges, 102.  
 Nebraska Experiment Station, Lincoln, Nebraska, 105.  
 Nebraska, federal grants for education to, 105.  
 Nebraska, University of, Lincoln, Nebraska, 99, 105.  
 Negro Agricultural and Technical College, Greensboro, North Carolina, 105.  
 Negro races, agricultural colleges for, 46 f.  
 Division of grants to, 49 f.  
 Nelson Amendment criticized, 73.  
 Nelson, Senator, Amendment to Agricultural Appropriation Bill, 1907, 55 ff.  
 Nevada Experiment Station, Reno, Nevada, 105.  
 Nevada, federal grants for education to, 105.  
 Nevada, University of, Reno, Nevada, 105.  
 New Hampshire College of Agriculture and Mechanic Arts, Durham, New Hampshire, 99, 105.  
 New Hampshire Experiment Station, Durham, New Hampshire, 105.  
 New Hampshire, federal grants for education to, 105.  
 New Jersey Experiment Station, New Brunswick, New Jersey, 105.  
 New Jersey, federal grants for education to, 105.  
 New Mexico College of Agriculture and Mechanic Arts, State College, New Mexico, 105.  
 New Mexico Experiment Station, Agricultural College, New Mexico, 105.  
 New Mexico, federal grants for education to, 105.  
 New York State Agricultural Society, and agricultural education, 77.  
 And the Smithsonian Fund, 75.  
 New York State Committee on Colleges, Acad-

- emies and Common Schools and schools for agriculture and the mechanic arts, 77.
- New York State, establishes an agricultural school at Ovid, 79.
- Federal grants for education to, 105.
- New York State Experiment Station, Geneva, New York, 105.
- New York State legislature, appropriates money for agriculture, 74.
- Bill for a state school of agriculture before, 74.
- Normal School of Science, London, 81.
- North Carolina College of Agriculture and Mechanic Arts, West Raleigh, North Carolina, 105.
- North Carolina Experiment Station, West Raleigh, North Carolina, 105.
- North Carolina, federal grants for education to, 105.
- North Dakota Agricultural College, Agricultural College, North Dakota, 105.
- North Dakota Experiment Station, Agricultural College, North Dakota, 105.
- North Dakota, federal grants for education to, 105.
- Norwich University, Norwich, Vermont, 76.
- O'DONNELL, Congressman, opposes Morrill Bill, 53.
- Ohio Agricultural and Mechanical College, 99.
- Ohio, and saline lands, 69.
- Federal grants for education to, 105.
- Ohio Experiment Station, Wooster, Ohio, 105.
- Ohio State University, Columbus, Ohio, 105.
- Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, 105.
- Oklahoma Experiment Station, Stillwater, Oklahoma, 105.
- Oklahoma, federal grants for education to, 105.
- O'Neill, Congressman, urges consideration of labor as well as agriculture, 63.
- Ordinance of 1787, 33, 69.
- Oregon Experiment Station, Corvallis, Oregon, 105.
- Oregon, federal grants for education to, 105.
- Oregon State Agricultural College, Corvallis, Oregon, 105.
- Overman, Senator, advocates federal aid for farm life and rural high schools, 93.
- Opposes Nelson Amendment, 58.
- Ovid, New York, agricultural school at, 79.
- Owen, Robert Dale, chairman of Committee of Congress on the Smithsonian Fund, 75.
- PACIFIC Railroad debts, 41, 42, 43, 44, 51.
- Paddock, Senator, 41.
- Page, Senator, advocates increased federal aid to education, 93, 95.
- Partridge, Professor Alden, memorial to Congress on education, 76.
- Patents, Commissioner of, Report of, 77.
- Patrons of Husbandry, support Morrill Bill, 37, 46 f.
- Payne, Congressman, interrupts debate on Adams Bill, 64.
- Opposes Nelson Amendment, 58.
- Pendleton Academy, Alabama, 71. [79.
- Pennsylvania, establishes an agricultural school, Federal grants for education to, 105.
- Pennsylvania Experiment Station, State College, Pennsylvania, 105.
- Pennsylvania legislature and agricultural development, 74.
- Pennsylvania State College, State College, Pennsylvania, 99, 100, 105, 108, 110, 111.
- Perce, Congressman Legrand W., has charge of Morrill Bill, 1872, in the House, 24, 27.
- Perkins, Congressman, supports Nelson Amendment, 57.
- Pestalozzi and agricultural education, 80.
- Philadelphia Society for the Promotion of Agriculture established, 73.
- Pierce, President, referred to, 10.
- Vetoes grants to insane asylums, 71.
- Platt, Senator, 60.
- Plumb, Senator, advocates direct appropriations to agricultural colleges, 40 ff.
- Pomeroy, Senator, 17.
- Porto Rico, University of, College of Agriculture and Mechanic Arts of, Mayaguez, Porto Rico, 105.
- Porto Rico, federal grants for education to, 105.
- Potter, Congressman, asks for committal of bill to Committee on Public Lands, 19.
- Reports adversely on Morrill Bill, 1862, 16.
- Practical education, Senator Morrill on need of, 29.
- Prairie View State Normal and Industrial College (colored), Prairie View, Texas, 105.
- "Previous question," the effect of, 7.
- Princess Anne Academy, Eastern Branch of the Maryland State College of Agriculture (colored), Princess Anne, Maryland, 104.
- Proctor, Senator, 56, 65.
- Proskau, agricultural school at, 81.
- Public lands, absence of policy regarding, attacked, 41.
- Constitution and, 9, 10, 11, 12, 15, 18, 69, 70 ff.
- Grants of, for education, 21, 22, 69, 70.
- For internal improvements, 69, 70.
- Principle of, opposed, 11.
- Politics and, 85.
- State governors report to Congress on, 18.
- Unequal proceeds from sale of, 40.
- Use of, 31 f.
- Pugh, Senator, opposed to federal aid, 71.
- Opposed to Morrill Bill, 8, 11.
- Supports aid to colleges for negroes, 46 ff., 50.
- Pulteney, Sir William, 81.
- Purdue University, La Fayette, Indiana, 104.



**QUEEN'S** Colleges, Ireland, chairs of agriculture in, 82.

**RAILROADS**, indebtedness of, to the government, 41, 42, 43, 44, 51.

Use of funds from, for education, 41.

Reagan, Senator, opposed to federal aid, 34 f., 38, 39, 72.

Reed, Mr., Speaker in House of Representatives, 51.

Regenswalde, agricultural school at, 81.

Rhode Island Experiment Station, Kingston, Rhode Island, 105.

Rhode Island, federal grants for education to, 105.

Rhode Island State College, Kingston, Rhode Island, 105.

Rice, Senator, opposed to Agricultural College Grant Bill as unconstitutional, 10.

Rosier, Abbé, advocates agricultural education in France, 80.

Roville, agricultural school at, 80.

Royal Agricultural College, Cirencester, 81.

Royal Agronomic Institution, Grignon, 80.

Rutgers College, the New Jersey State College for the Benefit of Agriculture and the Mechanic Arts, New Brunswick, New Jersey, 105.

Rutgers Scientific School, Rutgers College, 99.

**SALINE** lands, federal grants of, 69.

Saulsbury, Senator, 18.

Sawyer, Senator, supports Morrill Bill, 1872, 23.

Sayre, Mr. Monell, vi.

Schleissheim, agricultural school at, 81.

Schulze, Friedrich Gottlieb, and agricultural institutes in universities, 81.

Scotland, agricultural education in, 81.

Scott, Congressman, attacks Nelson Amendment, 57.

Secretary of Agriculture, control of, over agricultural colleges, 45, 61.

Secretary of Interior, control of, over agricultural colleges, 45, 46, 50, 55.

Secretary of Treasury, authority of, 55, 61.

Sherman, Senator, opposes Morrill Bill, 1872, 21, 24, 72, 87.

Proposes distribution of grants to common schools, 22.

Sheffield Scientific School, agricultural science at, 59.

Simmons, Senator, 56.

Skinner, John S., memorial to Senate on education, 76.

Smith-Hughes Act, 95 ff.

Smith, Joseph L., memorial to Congress on agricultural education, 76.

Smith-Lever Act, 95 f.

Smith, Senator, advocates increased federal aid for education, 93, 95.

Introduces bill for federal aid for vocational education, 95 f.

Smithsonian Fund, 75.

Society for the Promotion of Useful Arts organized, 73.

South Carolina Experiment Station, Clemson College, South Carolina, 105.

South Carolina, federal grants for education to, 105.

South Carolina, State Agricultural and Mechanical College of (colored), Orangeburg, South Carolina, 105.

South Dakota Experiment Station, Brookings, South Dakota, 105.

South Dakota, federal grants for education to, 105.

South Dakota State College of Agriculture and Mechanic Arts, Brookings, South Dakota, 105.

State governors required to report to Congress on public lands, 18.

State legislatures required to accept provisions of Agricultural College Grant Bill, 18.

State rights and the federal government, 10, 11, 12, 13 ff., 23 f., 71, 72.

Stewart, Senator, proposes establishment of a mining school, 1872, 23.

Stockton, Senator, opposes Morrill Bill, 1872, 24.

Stuart, Senator, brings up Agricultural College Grant Bill, Second Session, 35th Congress, 8.

Reports back the Morrill Bill, First Session, 35th Congress, 8.

Students in Land Grant Colleges, distribution of, 62, 98 ff., 102.

Surplus Revenue Distribution Act, 70.

Swamp lands, distribution of, 71.

**TARIFF** and public lands, 85 ff.

Taussig, Professor F. W., 86.

Tawney, Congressman, opposes Nelson Amendment, 57.

Taylor, Congressman, proposes amendment to restrict curricula of land grant colleges, 53, 54, 85.

Teachers, common school, and land grant colleges, 28.

Training of, expenditure on, in land grant colleges, 102.

Teller, Senator, proposes amendment to bill for additional grants, 29.

Tennessee Agricultural College, 99.

Tennessee Agricultural and Industrial State Normal School (colored), Nashville, Tennessee, 105.

Tennessee Experiment Station, Knoxville, Tennessee, 105.

Tennessee, federal grants for education to, 105.

Tennessee, University of, Knoxville, Tennessee, 105.

Texas, Agricultural and Mechanical College of, College Station, Texas, 99, 105.

- Texas Experiment Station, College Station, Texas, 105.
- Texas, federal grants for education to, 105.
- Textbook of Agriculture*, 78.
- Thaer, Albrecht D., agricultural schools of, at Celle and Möglin, 80.
- Tharandt, agricultural school at, 81. [87.
- Thurman, Senator, on agricultural colleges, 83, Asks for definition of agricultural college, 25. Attacks land grant colleges, 22. Opposes Morrill Bill, 1872, 22, 25, 26.
- Tipton, Senator, opposed to federal aid, 87. Proposes amendment to Morrill Bill, 1872, 24, 26.
- Townsend, Congressman, supports Nelson Amendment, 58.
- Transylvania College, Kentucky, 71.
- Turner, Jonathan B., Professor, leader in movement for agricultural education, 77, 78. *Plan for an Industrial University*, 77.
- Turner, Congressman, attacks Morrill Bill, 54, 88.
- Tuskegee Institute, 46.
- UNITED States Military Academy, 76, 77.
- Utah, Agricultural College of, Logan, Utah, 105.
- Utah Experiment Station, Logan, Utah, 105.
- Utah, federal grants for education to, 105.
- VERMONT Experiment Station, Burlington, Vermont, 105.
- Vermont, federal grants for education to, 105.
- Vermont legislature, Committee on Education, 75 f. [105.
- Vermont, University of, Burlington, Vermont, Vermont, University of, State Agricultural College of, 99.
- Vest, Senator, opposes federal aid, 61, 62.
- Vickers, Senator, proposes amendment to Morrill Bill, 1872, 24.
- Virginia Agricultural and Mechanical College and Polytechnic Institute, Blacksburg, Virginia, 99, 105.
- Virginia Experiment Station, Blacksburg, Virginia, 105.
- Virginia, federal grants for education to, 105.
- Vocational education, arguments for, 95.
- Vocational Education, Federal Board for, 96.
- Vocational Education, Federal Commission on National Aid to, 95, 96.
- Voorhees, Senator, supports Senator Morrill, 38.
- WADE, Senator, brings up Agricultural College Grant Bill, 9, 11. Introduces bill, 16.
- Wadsworth, Congressman, opposed to federal aid, 56, 73. Raises question on rules, 64.
- Walbridge, Congressman, brings in minority report on Morrill Bill, 4 f.
- Waldau, agricultural school at, 81.
- Warner, Senator, supports bill for federal aid to agricultural experiment stations, 60.
- War Office and military training in land grant colleges, 89.
- Warren and Son, Messrs., memorial to Congressional Committee on agriculture, 76.
- Washington, President, and a national university, 6, 69. And agricultural education, 73.
- Washington Experiment Station, Pullman, Washington, 105.
- Washington, federal grants for education to, 105.
- Washington, State College of, Pullman, Washington, 105.
- Webster, Daniel, on land grants to education, 69.
- Weende, agricultural school at, 81.
- Weihenstephan, agricultural school at, 81.
- Wellington, Professor R. G., on political parties and public lands, 85 f.
- West Virginia Collegiate Institute (colored), Institute, West Virginia, 105.
- West Virginia Experiment Station, Morgantown, West Virginia, 105.
- West Virginia, federal grants for education to, 105.
- West Virginia University, Morgantown, West Virginia, 99, 105.
- Wheeler, Congressman, 54.
- Wilkinson, Senator, opposed to distribution of public lands for education, 19.
- Williams, Congressman, supports increased appropriations for agricultural experiment stations, 64.
- Windom, Senator, opposes Morrill Bill, 1872, 24, 26.
- Wisconsin Experiment Station, Madison, Wisconsin, 105.
- Wisconsin, federal grants for education to, 105.
- Wisconsin, University of, Madison, Wisconsin, 99, 105.
- Wright, Senator, on use of public lands, 19.
- YALE College, agricultural science at, 59.





















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